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Scientific Fiction by: A. Hyatt Verrill

Ross Williamson G. Peyton Wertenbaker

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Our Cover

This issue depicts a thrilling scene from the story entitled, "The Birth of a New Republic," by the super-combination—Breuer and Williamson—in which the new colonists of the moon are shown being hoisted from the secret caverns, in an effort to warn Firecrest, one of their principal cities, of their impending danger.

Cover Illustration by MOREY

January 20, 1931

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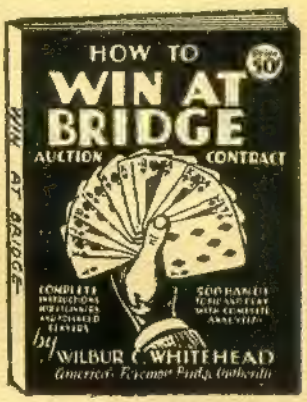

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"Science—Scientifiction—Science"

By F. B. Eason

SINCE the dawn of intellect, going back to the days of our cave-man ancestors, we have tried by the processes of reasoning to determine the why and wherefore for all causes and all effects. Our records do not carry us back as far as we wish, but we can visualize what our forefathers went through in their efforts to advance, to bring them from that mental darkness to the present dim light. They soon began to take notice that, when certain constellations appeared at certain points, a certain season was with them, and when these constellations passed from view in their evening sky other conditions presented themselves. They began to take note of these changes, to engrave these findings on stone, either in picture or by symbols. Thus on and on records were made; curiosity was aroused, efforts made to learn, thereby bringing us to where: "they saw that there was a cause, so there was an effect. There was an effect; what was the cause?"

As this progress was made there were bitter obstacles to overcome. There were hardship, trials and tribulations. But these barriers only were the incentive for greater labors. Today we do not have to battle as Aristotle, Ptolemy, Copernicus, Gallileo and others were obliged to. We are not considered "crazy as a loon," as we peer through our telescopes at the stars, clusters and nebulas. We are not considered peculiar when we are seen pouring over scientific books, or trying to solve problems, or when we express our desire to learn "the too deep for me!"

Today, in our mails, there are rushing over the entire country magazines, books, pamphlets of scientific nature to busy men and women, youth and age, thereby showing that at last we are becoming "science-minded." These magazines have taken a hold on the young, and psychology teaches us "that through the mind nothing is impossible which is not in violation of nature's laws." So in this manner we are storing ideas, which our busy scientists, who are now possibly lying dormant in our sub-conscious minds, will grasp and start to work on, and who knows what will be accomplished?

We do not know as yet what the future holds in store for us. But we do know that we have to plan to combat any emergency which may arise. We are told that we are approaching another ice age. We are told that our stores of coal and oil are disappearing. What would be the results if an ice age should suddenly come upon us? Now is the time to get busy, to wake up the scientists, who are now sleeping in your sub-conscious minds.

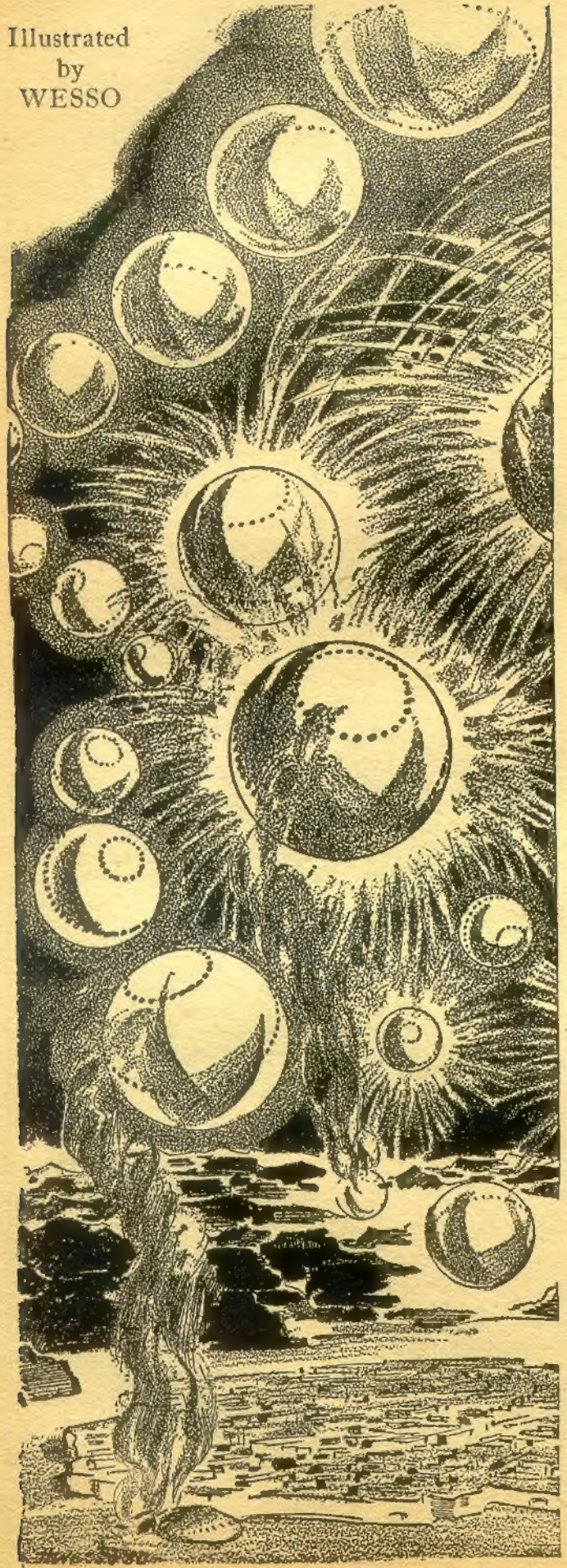
I have just received a letter from Wily Ley, of the famous Verein für Raumschiffahrt (Space-Ship Travel Society) of Berlin, who stated in part: "We are too busy to publish bulletins, we have our own flight grounds, and are now experimenting with ..... for a propellant" (I do not feel at liberty to state what they are experimenting with for the propellant), so let's get busy and experiment, and so take an active part in what has now become a mighty movement.

PRIZE WINNER

F. B. Eason
400 Jefferson Avenue
East Point, Georgia

(See page 144)

The Next Issue of the Quarterly Will Be on the Newsstands April 20th



Illustrated by WESSO

The Birth New

By Miles J. Breuer, M.D.
and Jack Williamson

CHAPTER I

The New Frontier

NOW, in the last year of the twenty-fourth century, I am setting out to devote the final years of a long and active life to the writing of a narrative of my small part in the historic period just closing, which was perhaps the most important in human history. During my lifetime, the human colonies on the moon have grown from weak, scattered cities to the powerful and prosperous Lunar Corporation. I was in the midst of the terrible struggle in which the autonomy of that corporation was won; and it is my purpose to write what I saw of that greatest of wars as simply and justly as I can.

My story must begin with my father.

He was born in Pittsburgh in the year 2276. Even at that time, now over a century past, the United States of America, in common with the other political organizations that once had ruled the world, had ceased to have any real power over the people within its ancient boundaries. Pittsburgh was a stronghold of the Metals Corporation, one of the most powerful of the half-dozen huge trusts that now ruled the world.

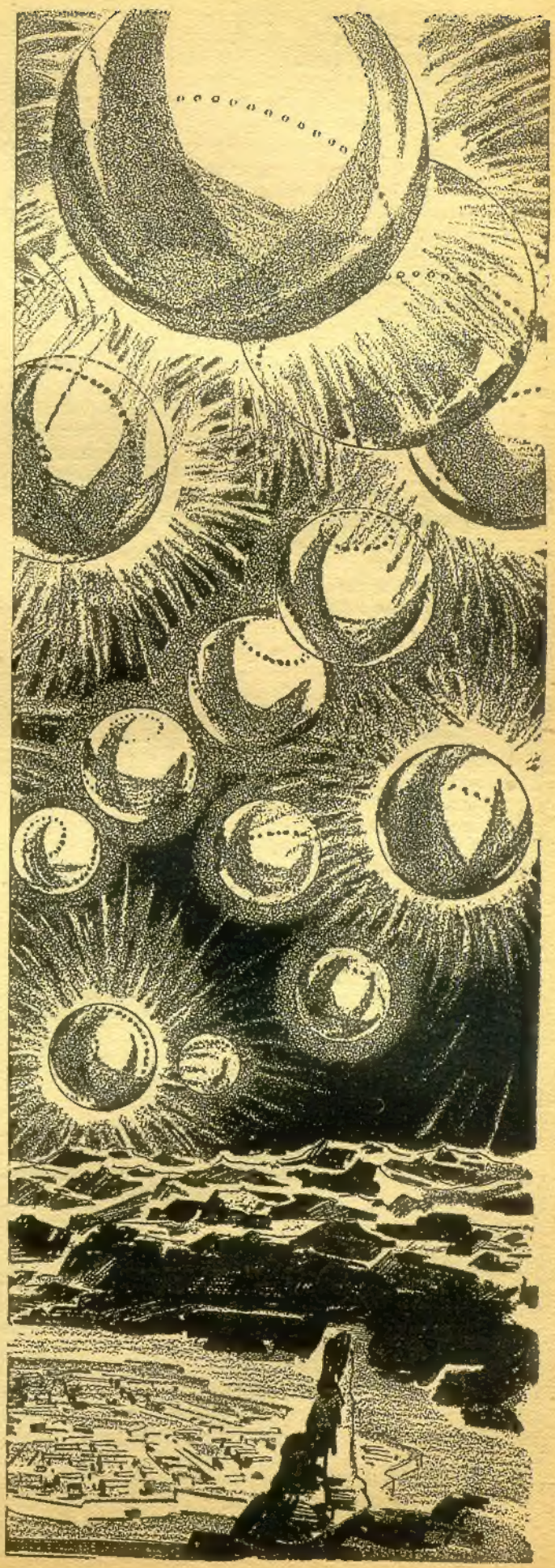
It was typical of my father that he should decide to migrate to the colonies on the moon. His pioneering spirit rebelled at the complex, well-ordered life of the earth. He was a deep thinker, in an original way; he had spent much of his youth roaming the earth in quest of an outlet for his restless energies of spirit. Far too much of a philosopher he was, to get any satisfaction out of the mockeries and superficialities of life in the great cities of earth.

Father was not the man to shut himself up back of a desk in a little glass cage for eight hours of every day, to provide himself with a golden fringe to his tunic and take his wife out to fashionable gatherings, where they would chatter of the latest risqué shows and bet on the rocket races, squander a working man's for-

"Only some twenty-odd of Van Thoren's globes came out."

of a Republic

IN these days of standardized comforts and minimized dangers in living and traveling, we find ourselves—those of us, at least, who have a hankering for the unusual—trying to dig out stories of the old colony days, or, more recently, of the frontier days of the Golden West, in order to add a little romance and adventure to this work-a-day world. But such pleasure must, at best, diminish in intensity as the stories become more familiar and anecdotes are repeated. And even if the thrill of new adventure must remain vicarious for an uncertain length of time, tales of pioneering on different planets or other bodies entirely separated from the earth, with its absolutely strange and necessarily conjectural dangers and difficulties, if presented realistically and with plausibility, must be absorbing indeed. A yarn by either of these authors would promise much. The combination of Breuer and Williamson leaves little to be desired.



tune at cards and dance themselves ragged to blaring jazz, to go home tipsy with "2,200 port." My parents were not that kind of people at all.

It is natural that they thought of emigration to the moon.

There was a new world waiting. There, beyond a quarter of a million miles of space, hardy pioneers had opened up a new frontier, two centuries after the last frontier had vanished on earth. Life was simple there and hard. Men were free from convention and artificial restraint. They lived close to nature. They fought for what life gave them, depending upon their hands instead of their purses. On the earth's satellite was a new field for men with initiative and independence, men who could live and work beyond the protection of the machine. On the moon a man was not a

mere cog in the vast, clumsy wheels of society. When he had fought for a home and had won it, he could feel that it was truly his own.

Father was a trained engineer as well as a skilled workman with his hands. He was employed in the great laboratories of the Metals Corporation in Pittsburgh, in which were designed the automatons which each year did more of the routine work of earth, leaving men more time for vicious idleness and inane recreation. His position was an enviable one in the eyes of his fellows. There was opportunity for advancement, for a salary that would enable his family to take a high place in the artificial society life of the corporation's capital, perhaps even an opportunity, if he showed executive and financial ability, for him to win a place on the Board of Directors.

I remember a fat, pompous, red-faced gentleman named Kieling, who was several times at our rooms—I think he was interested in some fantastic scheme for smuggling drugs from India by submarine and wanted Father to help design his apparatus. However that may have been he had an excellent standing in Pittsburgh society. He displayed remarkable persistence in coming to see Father about his plan, in the face of every discouragement save actual breach of manners, of which my parent would never have been guilty.

He seemed incredulous when he heard that we were to emigrate to the moon. Young as I was—then hardly five—I remember sitting and looking up at the gross fellow as he sat twisting the blazing rings on his fat fingers and expressed his opinions of such an adventure.

"John, you mean to tell me you're goin' to throw over your job for a fool thing like that. The moon's just a desert—you've seen the movies of it, of course. Hot as hell in the day and freezes the air at night. Wild mountains, full of the damned Selenites, looking for a chance to kill and eat you.

"No comforts there—not a beach or a pleasure-palace on the whole damned planet. You're not even your own boss. Stay here and you may get to be a director of the corporation. On the moon you can't turn around without a confounded Colonial Secretary of the corporation to give you leave.

"But go ahead, for all of me. I'll wager Mrs. Adams can find another man." He grinned at my mother, who was sitting, primly composed in a rocking chair; then suddenly burst out into an uproarious laugh as if he considered that a joke.

Father said nothing. Kieling pulled out a huge black cigar, lit it and puffed out a cloud of choking blue smoke before he went on.

"And think of the voyage. I wouldn't make it for a case of Bourbon! Not me! Cold, cramped little rooms, passengers crammed in like sardines. Keep you half suffocated. And the space-sickness—one in a dozen dies, you know. The company doesn't give a damn, just so they get the passage money.

"You know Carlton—the Communications Fifth Vice-President—he had the fool idea of taking his wife to the moon for a trip when they were married. She took space-sickness and died—lack of vitamin J, the medicoes said. And Hamlin—he was a friend of mine—went on a collection trip to Colon and came back with his lungs wrecked. And Smith—he had been a Colonial Secretary on the moon for fourteen years—he was coming back with his family and a meteorite smashed the ship. Gone, just like that!" Kieling snapped his fat fingers.

My father straightened. "I know all about that," he said in his low, courteous voice. "But nearly two million people have gone to the moon and made a go of things there."

"Yeah! A hell of a 'go'! You've got to get out in the hills with the wild moon calves and work like the devil for half what you'd get in an office right here. Out in the craters all day, living on a little canned stuff and roasting in the sun—then racing back to one of the shabby little towns to keep from freezing in those endless nights. John, you better think that proposition over again——"

"That's settled, Kieling," father said briefly. "I'm having nothing whatever to do with it, no matter how safe your lawyers say it is."

"Dammit, John, I hope Boss Varney gets you—or I would if it weren't for your wife."

THEN the conversation turned to Varney and those other famous pirates of space. Tales of them always enthralled me. They were bloody and desperate men, no doubt. But the peril and romance of their calling cast a peculiar lure upon it, and I think most boys of the time dreamed of the day when they might run away to space.

Varney was perhaps the most noted of them all. The tales of his exploits were legion. He had robbed a dozen rich ships. Once he had fought and destroyed a fleet of three space patrol cruisers in full view of New York City. A few years later he had captured the President of the Chemicals Corporation and his daughter, taking them from a liner he had run down on the space-lanes to the moon. He had treated them very hospitably until he could land them at a little village on the California coast. He was variously reported to have had his base of operations in the interior of Greenland, in the jungles of Brazil, in the Himalayas, and behind the moon. In the past thirty years a score of expeditions have been fitted out to search for his buried treasures. But, so far as I know, Varney's gold still lies wherever he may have hidden it; though I suspect that his lawless crews must have gambled and drunk a good deal of it away in the cities in Mexico, in the Orient and on the moon, in any place that was wild enough to tolerate them.

Kieling's remarks about conditions on the space fliers had some justification. They might have been better, but the Metals Corporation maintained a monopoly on trade with the moon and its warships of space ruthlessly rammed every other vessel caught in the lunar space-lanes. The construction and operation of space fliers were expensive, and the ships were crowded with those who could barely afford to pay the passage. Their comfort occasioned the officials of the line little concern.

As the fellow had said, meteorites were dangerous. During the hundred and fifty years of communication with the moon a thousand ships had been destroyed by collision with these iron wanderers in space. No system of telescopes, searchlights, or radio beam detectors proved a complete safeguard against them. And again and again ships reached the space-ports wrecked and leaking the vital air, with the crews forced to wear oxygen helmets and the passengers dying in their quarters.

Even when the emigrant had been landed in one of the three great cities on the moon, his troubles were far from over. There were the pain and hardship of the physiological changes necessary to fit one for the lighter air and lesser gravity of the satellite. Long days in bed in a compression chamber, with the air pressure gradually lowered. Torturing pains in the lungs. A dull ache in the head for many weeks as the brain became accustomed to less pressure of gravity.

When Colon reached the moon there had been only a trace of air detectable. Since the mass of the satellite is only about one-eightieth that of the Earth and its diameter about one-fourth, the force of gravity at its surface is only about one-sixth of the terrestrial value.

Owing to that, the velocity of escape for the moon is only about one and one-half miles per second, as compared to seven miles for the earth. Consequently the satellite had lost most of her air in ages past; the kinetic theory demonstrates that molecules of air even attain the velocity of seven miles per second required to carry them free of the earth's pull.

Colon and the other early explorers had relied on air-pressure suits, with heating pads and oxygen helmets; and the first mining operations had been in shafts capped with air-tight domes, in which could be maintained a normal atmosphere of artificial air. But as the mining industry increased, such methods were hardly satisfactory, and the officials of Metals sought for something better.

Cardigan, one of the first trained mining engineers to go to the moon, encountered and solved the question of artificial atmosphere. The native rocks of the earth (and of the moon) are composed nearly to the extent of 50 per cent of the vital element, oxygen, held in combination. Cardigan developed a rapid process of liberating it from silicon dioxide and other abundant compounds; and with the limitless sources of atomic power available, his plants were soon turning out huge volumes of the gas. Nitrogen, the other chief constituent of terrestrial air, is much less abundant in nature; but helium, which is one of the natural products of disintegrating atoms, was plentifully available, along with limited amounts of the other inert gases of its group, and was known to be vastly superior to nitrogen for diluting oxygen for breathing purposes, having been used for many centuries in preparing artificial air for divers in the oceans of Earth. It is less soluble in the blood than nitrogen and does not give the trouble called "the bends."

Cardigan also developed an efficient process for the synthesis of water from hydrogen and oxygen, to provide the requisite humidity for his new atmosphere. His great plants were kept going a quarter of a century before a sufficient atmosphere had been provided, and even now the artificial humidity freezes in the two weeks of the lunar night, though men go abroad during the long day, breathing comfortably.

Even after the emigrant became accustomed to the new conditions of gravitation and barometric pressure, there was a pioneer's rough life to face in the mines or the crater farms. One must start at the beginning, with an iron will to learn the ways of a new planet and fit himself to them. There was no place for the coward or the shirker.

Discomforts and perils were many. During the two weeks of the lunar day, the sunlight is intensely hot and blindingly bright. One swelters in white garments, sun helmet, and tinted glasses. And during the long night it is bitterly cold—so cold that the air grows solid, and falls in a crystal snow upon the rugged lunar mountains. During that terrible period of cold and darkness, the colonists were shut up in their sealed cities, and in the cheerless underground passages of the mines.

Outlawry was flourishing. Bandits had hidden retreats in the wild lunar deserts; smugglers of space regularly matched their wits against those of the commanders of the Metals warships; pirates of space—like Varney—relied for their livelihood upon their daring and their skill in the use of stolen disintegrator tubes.

The Selenites were another peril. Those native inhabitants of the moon were intelligent, savage beings, whose budding civilization had been ruthlessly crushed by the first adventurers on the moon. The more highly civilized and better-natured tribes had been worked to death in the mines. Those that had escaped slavery were, for the most part, bloodthirsty beings, roaming the lunar craters and deserts beyond the outlying human settlements, sometimes descending in bloody raids upon the miners and farmers, massacring whole settlements. There was constant bitter warfare between the settlers and these savage tribes of Selenites.

Such was life on the moon, as it appeared to the friends and associates of my father. His superior in the laboratories talked to him of his plans, outlined these disadvantages, and offered him a better position and higher pay immediately, if he would remain.

THERE were other things to think of. Mother was a slight, frail woman, for all the iron strength of spirit that shone in her deep blue eyes. She was willing enough to try life on the new planet, but father was afraid that the hardships of it would be too much for her health. Certainly she would be without the thousand luxuries that a mechanical civilization had given the world, until they seemed necessities.

The children were considered. I was five years old; my older sister, Valence, was twelve; and there was a baby girl, little Fay, aged two. Our parents feared that we would not survive the hardships of the voyage. And if we did, what of our education, our future? As we grew up, would we be willing to go without the opportunities of earth, to be pioneers?

Father and mother talked to us of their plans, though of course I was too young to take much part in the discussion. The matter of emigration was under consideration for some time, and I believe an adventure of my own had a good deal to do with the final decision.

I had a little helicopter flier that father had given me on the Christmas before. Its propellers were operated, I think, from a compact storage battery. The talk of emigration had turned my mind to thoughts of travel, and one day I left the great community-hotel in Pittsburgh, in which we lived, and flew out over the country. I had been told not to leave the park about the building, but that mattered little against the call of adventure. And the little machine had a safety device that was supposed to bring it down after a flight of two minutes; but I have always had a mechanical turn of mind, and I had been able to incapacitate that with a screw-driver.

With the urge for adventure strong in me, I flew out into the hills for a score of miles or so, before the battery ran down. Even at this period modern methods of communication and the Zaner processes for the artificial manufacture of crude carbohydrates, proteins, and fats, had largely ended the day of farming. Then, as now, the population was concentrated in the cities, and the countryside was a lonely and deserted waste.

I do not remember all the details of the incident, but it was two days before father found me. Fortunately, it was summer. I had found a briar patch, and made several meals on blackberries. My handkerchief was hung up on a pole to guide the searchers I expected. When father came, I had just managed, after a score of fruitless attempts, to kill a cottontail rabbit with a rock. I was industriously rubbing two sticks together with the idea of making a fire to cook it, having heard that savages used such a method. I was taken home, spanked, and cried over by my mother.

I believe that incident, with its display of self-reliance and hardihood, is what determined my father to undertake the emigration. At any rate, the next thing I knew, it was agreed that we were to start—much to my delight.

I remember a trip out to the great space-port, with mother. I can still see the great landing platforms before the hangars, with the cradles on their tracks in front of them. With childish eagerness, I looked for

ward to the time, when one of those great silver globes would carry me into the mystery of the sky.

It was agreed that we should emigrate to the moon. But before we got off, a very serious difficulty arose—a difficulty connected with the complex and highly artificial social organization of the world, with the relations of the great corporations that ruled the earth. Not only were our plans disarranged, but father very nearly lost his life.

CHAPTER II

A Lecture on Lunar History

ONE evening, when he came home from the laboratory, father called Valence and me to him, and took brown-haired little Fay on his knee.

"I have a new record for the magnetic phonograph," he said, slipping a little spool of thin steel wire out of its case. "It tells about the moon, who found it, and how men are able to live there. Do you want to hear about the world we are going to in the big space flier, Johnnie?"

"Yes, Father. I'll try hard to understand."

Valence ran to get the little instrument, and adjust the spool in place. She pressed the switch, and set it on the table. A few bars of swift music came from the diaphragm, and then the suave voice of the announcer:

"An address on the history of the moon, covering events from the first attempts at interplanetary navigation to the present time, delivered by Professor Avery Smithton, of the Pan-American University."

A moment later the professor's words began, in a rich, lively voice, well in harmony with the mysterious appeal of his subject. I listened in rapt attention, to learn more of the wonderful world to which we were going.

"Crossing the gulf of space has always been one of the great dreams of man. In the great age of scientific progress, that began about five hundred years ago, a great deal of thought was given to the question. A French romancer, Jules Verne, brought considerable attention to the subject with a plausible tale of a voyage around the moon in a great projectile fired from an immense gun. A few years later, an English novelist, Wells, wrote his great classic, 'The First Men in the Moon.' Like an older writer, Jonathan Swift, with his 'Gulliver's Travels,' Wells was satirizing humanity; and, like Swift's, his satire has been forgotten for the interest of his story. Though science has never duplicated his marvelous *cavorite*, his book is still read for its marvelously accurate pictures of the moon.

"These novels must have been a great spur to inventors working on the problems of space navigation.

"It was late in 1989 that Smith and Orloff made the great discovery that led to the building of the first space ship. Scientists had long held that the atoms of other heavy metals might be caused to break up like the radium atom, thus making available limitless sources of power. Those two great physicists, working together, found that a block of thorium, alloyed with small quantities of certain other elements, had its radioactivity vastly increased when a beam of electromagnetic radiation of a frequency only slightly above that of the Cosmic Ray was turned upon it.

"Within a short time, intra-atomic energy had replaced the old steam and internal combustion engines, and even the wind and tide power plants. Three years later, these scientists succeeded in breaking down the atoms of platinum, osmium, and iridium. Then, indeed, man was ruler of his world.

"Ordinarily, power is drawn from the atomic engines in the form of heat; but, in the winter of 1994, Orloff, continuing his work, discovered that certain alloys of platinum and iridium suffered atomic disintegration under the ray in such a manner as to throw off atomic particles at almost the speed of light. The *alpha* ray of radium consists of charged helium atoms thrown off at about one-tenth the speed of light; the 'atomic blast' is a phenomenon of the same order, but vastly more powerful.

"The discovery resulted in a laboratory cataclysm. The fiery stream of atoms, bursting out of the tube, demolished the laboratory wall, while its reaction against the block of metal wrecked the apparatus. Orloff was seriously injured, his left arm having been cut off by the blast. He died a few months later, but not until he had revealed to his colleague the conditions of the experiment.

"Smith, then a young man, seems to have turned his attention to financial affairs. It was not until 2035, when he had become immensely wealthy by commercializing the atomotor, that he first undertook to propel a vessel by the reaction of the Orloff atomic blast. He used a rocket car of the Goddard type, with the repulsion units attached to the rear. His first model ascended successfully, though without a living passenger, and the old man lived to see his ships regularly engaged in round-the-world express and passenger service.

"He seems to have become infatuated with the possibilities of interplanetary travel opened by the device—one wonders how much he was influenced by those old romances I have mentioned. Two projectiles, containing various scientific instruments, were shot at the moon in 2041; and several observatories reported a flash of light on the disk of the satellite, supposed to have been the light of the magnesium charge with its detonator carried by one of them, exploding upon impact. In 2043 Smith left the earth in a larger projectile, built in the Andes. It is believed that this first space ship was struck by a meteorite, as the explorer was never heard from after he had passed the Heaviside layer."

"I read about him in our history class!" Valence interrupted.

"It seems to have been about the year 2100 that a young man of uncertain nationality again brought interstellar navigation before the world as a serious possibility. That man was an able and untiring scientist, a brilliant orator, and perhaps the greatest explorer of history. His name is so well known that I need hardly repeat it. It is Jean Colon."

"Oh, mother told me all about Jean Colon!" I cried.

"It took all the genius of the man to win support for his great idea. It was only a result of a quarter century of tireless labor, in the face of constant ridicule and discouragement, that the Metals Corporation, in 2124, advanced funds to Colon with which to construct a space flier.

"SIX years later, in 2130, he left San Diego, California, with three small vessels, the largest of them only fifty feet in diameter. He had found less than a hundred men who were willing to undertake the great adventure with him—and most of those were rather lukewarm in their enthusiasm.

"Those little ships, however, were far in advance of the steel cylinder of Smith. They were globular in shape, like the modern commercial vessels, built of aluminum alloys, and polished mirror-like, to retain the heat, so that they looked like huge spheres of silver. A great wheel, inside, carried the sleeping and eating com-

partments inside its rim, being rotated at sufficient speed for centrifugal force to replace partially the pull of gravity. At one end of the axis of the great wheel was the bridge-room, at the other, the battery of atomic blast projectors.

"The departure was made at midnight. The literature of the age is full of descriptions of the scene. The men had gone aboard, and the air-locks had been sealed after the last farewells. As the hour drew near, the field about the cradles of the ships was cleared of the vast crowd that had gathered to witness the first act of the great adventure. The ships lay there, huge silver balls, gleaming in the light of the full moon, strange and still.

"The propeller rays were turned on. Vast jets of intense white flame burst from beneath the globes, outlined them in blinding light. Clouds of luminous, weird-colored vapor whirled up about the globes—air bombarded by the radioactive particles became luminous of itself. Veiled in screens of shifting scarlet and green and amber fire, the silver globes stirred, lifted, shot upward.

"On our own day, the sailing of a space flier is hardly so spectacular. That was before the modern refinements in the atomic blast, that have eliminated the secondary heat and light effects, with their vast loss of energy.

"In a few moments, the ships were out of sight, gone to mark an epoch in human history. For many minutes vague mists of shining violet drifted about the field.

"Until radio communication was cut off by the Heaviside layer, the world was in touch with Colon. In fact, the ships were within telescopic view for several hours, during which time a few brief messages were sent from the heliograph on Colon's ship.

"Then long weeks and months went by, and nothing was heard from the explorers of space. In vain astronomers studied the face of the moon for any sign of human arrival.

"It was four months later that the world was electrified by that famous laconic radiogram, 'Space is conquered and the moon is ours. Jean Colon.'

"That message awoke America at midnight. It meant that Colon was back inside the Heaviside layer. Within an hour the blazing atomic blast of a space flier was visible over the great southwestern plantations of the Food Corporation; and by dawn the world knew that Jean Colon, a hero overnight, had landed safely on the New Mexico deserts.

"Only one ship returned. One of the others had turned back, against the orders of the intrepid admiral. Crew and commander must have paid for the mutiny with their lives, for no trace of the ship has ever been found. Like a thousand others since, it must have been wrecked by meteoric collision. The other vessel, too badly wrecked in landing on the moon to be repaired, had been left as a sort of fortress, in which a few men stayed to garrison this new territory of the Metals Corporation.

"It was a strange and rich cargo that the single vessel carried. There were huge masses of yellow gold, and great nuggets of the three heavy metals that were now doubly precious, since they were the source of the power of the earth. There was over a pound of radium, and specimens of a thousand minerals, some precious, some new to science. The moon, so stated the enthusiastic Colon, and truly, was a treasure-house of minerals, a golden mine for the earth.

"The ship carried strange plants and stranger moving things from the moon. Colon brought proof that the ancient astronomer, Pickering, had been correct in interpreting his observations as showing life in the craters of the moon. Some of the plants and the grotesque, insect-like creatures were still alive, but none survived terrestrial conditions for more than a few days.

"The weirdest part of the astounding cargo was a dead, monstrous creature from the moon—one of the Selenites, a member of the ruling race of the moon, a being so huge and so formidable that the explorer had not attempted to bring it alive. But Colon had mounted his specimen, in a pose that suggested alien life. It had a huge, flimsy body, with long, slender legs, four in number. From its head depended a single, long tentacular appendage. There was something elephantine in the bulk of the thing, even in shape it vaguely suggested an elephant on stilts."

"A thing like what we saw in the museum, when we went to see the horse," I broke in again. But the professor's lively account went on relentlessly.

"The stories that Colon told of those creatures seemed incredible to the people of the time. They were intelligent, he said, far more intelligent than the elephants they remotely resembled. Their mentality must have approximated that of the Australian aborigine, called blackboy. The most of their kind were wild rovers of the lunar mountains, but one tribe, isolated in the crater of Archimedes, near which Colon had landed, were developing an elementary civilization, learning the use of simple tools and building rude shelters. Most of the gold and platinum on the ship Colon had taken from them, giving them a few bits of food in return—the terrestrial foods, especially the carbohydrates, being foreign to the chemical nature of the Selenites, produced in them a curious state of intoxication.

"Those moon-calves, or Selenites, as they came to be called, are far different from the life of earth, even based upon compounds differing radically from the protoplasm of terrestrial life. The scaly red skin composed largely of silicon compounds, that covered their huge, clumsy bodies, was hard and tough, because of the sharp rocks among which they lived—it was proof against the bullets of the primitive firearms with which Colon had attacked them. But that tough, crimson integument was transparent to ultraviolet light—it has since been demonstrated that these beings draw most of their energy from the sun. The jaws were short and terrifically strong, armed with conical teeth hard enough to grind the rock from which these creatures derive the matter from which they are made.

"The four legs, which support the elephantine body, are oddly long, for jumping the wide crevasses of the moon. The huge eyes, three in number and situated above the trunk-like or elephantine member, are remarkable for their size and for the conspicuous green iris diaphragm, which adapts them for vision both in the dark nights and in the blinding light of day.

"COLON made several more voyages in the larger ships that were soon built by the score. The earthward surface of the moon was explored, science was enriched with countless specimens of minerals, fauna and flora from the moon. The markets of the world were flooded with huge supplies of precious metals captured from the more civilized tribes of Selenites. The huge revenue that the Metals Corporation drew from its lunar possessions enabled it to throw off the last vestiges of political control, and take its place at the head of the new Union of Corporations.

"What does it matter if moralists say that the conquerors did wrong in destroying the most cultured races of the moon-calves, for the sake of a little precious metal? Corporations have souls no more than nations have them.

"A Moon Company, subsidiary to Metals Corporation,

was quickly organized. It ruled and exploited the moon as the British East India Company had governed and fattened upon India for two centuries after the expansion of European power.

"In a dozen years after Colon's landing on the moon, space fliers laden with bands of adventurers had overrun all the earthward face. Two great nations of Selenites, possessing culture that, according to recent 'lunarcheologists' had developed to a surprisingly high degree, had been conquered, robbed, and enslaved in the mines.

"The most remarkable, perhaps, of these lunar nations, was that of the K'Inva, in the great crater of Tycho. One of the most interesting topographical features of the lunar surface is this annular crater, 150 miles in diameter, situated at 43° South, 12° East. It is surrounded by a perfect ring of cliffs 15,000 feet high, and from it radiate the white 'rays' which so puzzled terrestrial astronomers until it was shown that they were Selenite roads. Protected by the cliffs, the tribe called K'Inva had built up a marvelous culture in this crater. Conquered, despoiled, and enslaved by Count Vauban and his lawless followers, kept in subjection by intoxication with artificial carbohydrates that wrecked their physical and mental powers, and worked to death in the mines, hardly a one of them was left alive in a hundred years, and now hardly a memory of them survives.

"However, bands of the ferocious wild tribes, the K'Larbah and others, still roam the lunar deserts, sometimes doing a little useful work for the human prospectors and miners, who use them as beasts of burden, but more often intoxicated with the synthetic carbohydrates with which they are paid for their labors, they run amuck, committing frightful outrages."

"Oh, I read a story about that," Valence's sweet voice chimed in. "*'The City Behind the Moon!'* A ship was wrecked on the back of the moon. There was a brave man named Charlie. He fought a lot of the wild moon-calves, and saved a girl named Lydia. He carried her and ran. The night was coming, and the moon-calves were running behind him. He came to a city of silver towers, where nobody—"

But the phonographic lecture went steadily on, and father held up his hand to silence her report on the wild romance.

"—years went by, the Moon Company began the importation of human labor. At first the tendency was to send only criminals and undesirables generally. But as civilization became more complex, and the corporations began to encroach more and more on the rights and privileges of the individual, there were many who were willing to pay their own passage to the moon, to win new freedom.

"These hardy settlers found and worked new mines of their own, when the new lunar atmosphere enabled them to live without space suits, trading the metal to the Moon Company for food and supplies from the earth. Farming, on a limited scale, was undertaken in the arable craters; some of the native plants of the moon produce drugs which command a high price in the markets of earth. Manufacturing, though discouraged by the Metals Corporation, was undertaken; and now vast quantities of simple synthetic foods are manufactured on the moon, as well as a variety of metal commodities.

"The Moon Company, originally a small corporation subsidiary to Metals, is now almost altogether in the hands of the inhabitants of the moon, since the lunar cities, as well as the more prominent citizens of the moon, have from time to time purchased blocks of stock, with a view to controlling all their own affairs.

"Metals has never made public the secret of Orloff and Smith's atomic blast, and the projecting engines had never been placed on sale; hence the corporation maintains a virtual monopoly on trade with the moon, and the directors feel sure of their ability to control the settlers, even while humoring them by letting them have the stock of the Moon Company.

"There are, however, many crews of pirates and smugglers, operating space fliers, that had been obtained by fraud or capture, with which they carried on a lucrative illegal trade, escaping from Metals' warships, and sometimes capturing a vessel laden with precious metals or equipment. The trade of piracy seems to have no particular dishonor attached to it, though pirate ships are rammed, when possible, on sight, and captured crews are electrocuted.

"At present, the population of the moon is nearly two and a half millions; there are three great cities, Theophilus, Colon, and New Boston, and scores of smaller settlements. The satellite represents an excellent market for terrestrial manufactures; and the value of the metals and chemicals received from the moon is of incalculable value to the earth's industry.

"Recently there have been hints that the lunar population is becoming discontented with the strict rule of the agents of Metals, and that there is dissatisfaction with the prices paid for metals on the moon, which average less than half their value in Pittsburgh. The speaker cannot recommend too strongly that every means be used to foster the former good feelings between the two planets. It is hard to visualize a greater tragedy for the earth than the loss of the resources she has been drawing for so long from the moon."

The lively, animated voice stopped abruptly, as the professor had worked his way up to a current political issue. A few brisk bars of music came from the little machine. Then a clear female voice began to speak rapid, persuasive comments upon Cynguff's Synthetic Beverage Tablets. "A pitcher of water and a purple pill! What shall it be, whisky or cognac, bourbon or gin?" Father pushed the switch, and the words stopped in the middle of a sentence.

"Johnnie and Valence, that's the moon, the big world where we're going. We may have a hard life there. But I know that you children will grow to be fine, strong men and women. That's the thing mother and I are living for—"

"Oh, I see it outside the window," I cried.

I pointed my childish arm to the bright, mottled silver disk, floating huge and mysterious above the trees in the park.

CHAPTER III

War Between Corporations

IT was late in the year 2306 that my father made his decision to emigrate to the moon. He arranged for passage on the great ship *Venus*, of two hundred feet diameter, which was to sail in August, 2307. Father was moderately wealthy. Though the rates of passage to the moon were rather high, his fortune was great enough to pay our fare and leave funds for the purchase of a mining prospect and machinery on the moon.

But, before the time for our departure, a serious difficulty arose.

The Transportation Corporation, or "Tranco," as it is more usually termed, had long been jealous of Metals over the space lines to the moon. Over a hundred years before, when the great trusts had ended a century of warfare by the formation of the Union, it had been agreed that Tranco would have a monopoly of transpor-

tation on the earth. And Tranco had always claimed that the operation of space fliers to the moon, by Metals, was a violation of that ancient agreement. Blood had been shed over the matter a score of times; but since Metals had never revealed the secret of the atomic blast projector, its rival was helpless to build space fliers of its own.

To present the situation clearly, I must outline briefly the decline of political government and the rise of the corporations.

The League of Nations had successfully prevented war among the nations after the first half of the twentieth century, and gradually the great standing armies of the world were done away with. In the meantime, the power of the corporations was growing steadily, and presently, as the old political governments grew too weak to enforce law and order, the armed guards and watchmen of the corporations had taken the places of policemen and soldiers.

By the time of the first successful voyage to the moon, the real power of political government was ended throughout the earth, although certain of the old national organizations continue to exist in name, and some of them, such as the United States, exert considerable moral influence, even though devoid of any real authority.

For two centuries great confusion existed under the control of the corporations. At times their wars threatened to destroy the age of industry that had ended the old political régime. The development of the disintegrator ray (or the "D-ray")—an offshoot of the discovery of Orloff and Smith—made war so terribly destructive that at last the corporations saw it to their advantage to maintain the peace.

Shortly after 2200 a series of great mergers resulted in the formation of a half dozen huge corporations, each controlling one commodity over the entire earth. Of these, the greatest was the Metals Corporation, which was already drawing vast revenues from the moon, though the Food, Power, and Transportation Corporations were formidable rivals.

The Food Corporation had come into possession of most of the farming lands of the earth, Metals claimed the mining sections and the great manufacturing cities, Transportation owned seaports and rights-of-way, Power owned cities and transmission lines. Each corporation maintained a vast army of guards to see that its property and trade rights were not encroached upon, and the complexity of the map furnished room for a thousand disputes.

Early in 2307, months before the time set for our departure for the moon, officials of the Metals Corporation were much perturbed by a rumor that the secret of the atomic blast projector had been rediscovered, and that the discoverer was disposing of the long-kept secret to the Transportation Corporation.

At first the report was indignantly denied by Tranco. But Metals possessed, at that time, a system of espionage that is probably the most perfect that has ever been devised. Within a few weeks the fact was discovered that one of the great floating islands, designed by Tranco engineers centuries ago, to facilitate transoceanic aerial communication, had been moved to a lonely position in the South Pacific, and had some secret activity going on upon it.

Spies succeeded in reaching the island, and brought back the news that eight space fliers were in course of construction there.

When the news was made public, the greatest excitement reigned. Men were loyal to the corporations with a real loyalty. Men loved Metals or Tranco with an affection as deep as that which their ancestors had had for England or America. Soldiers were willing to fight for their corporation not only for pay, but because they believed in it, loved it, because their homes and their lives depended upon its defense.

My father was as patriotic as any man; at the first threat of war he hastened to volunteer to enter the forces of Metals Corporation, even though it meant indefinite postponement of his plans for emigration.

I remember very clearly the day when he came home, at an unusual hour in the afternoon, with tears in his eyes, to tell mother and Valence and me that he had entered the army, that he had to go away that night. For long hours we sat in our little drawing-room in the great hotel. Father held me in his lap. They talked of our plans, and how they had failed. Then father kissed us all and went away. I saw the hopefulness and forced cheer of the parting; the fear and the tragedy of it I did not understand until long after.

The next day the great city was oddly still, and a fleet of space ships floated like silver bubbles in the air above it. Those who had not been called to war gathered in little groups and talked, usually in tones unconsciously lowered, though sometimes there was shouting and hysterical laughter. Metals and Tranco were at each other's throats, in a struggle that had flared up, almost overnight.

WE saw none of the fighting in Pittsburgh. But there was much hand-to-hand conflict, with heavy loss of life, in localities where men of both corporations were living side by side. New York, Galveston, London, Tokio, and Perth—great seaports owned by Tranco—had been swept by "D-rays" from the space fliers of the Metals Corporation, and by way of retaliation, the air fleets of Tranco dealt considerable damage by dropping bombs on the territory of Metals that was not protected by fleets of space fliers.

Before the end of the day, a treaty of peace had been concluded. Such a war was too deadly to last for long without the ruin of the earth. Tranco was compelled to yield the victory, since the floating island, with all the unfinished ships upon it, had been destroyed by a fleet of Metals's space fliers.

The rediscoverer of the atomic blast, one Dr. Vardon, had perished on the island, it became known. It was said that he had a family, a wife and baby daughter, who had been left in America. But no trace of them was found by agents of Metals.

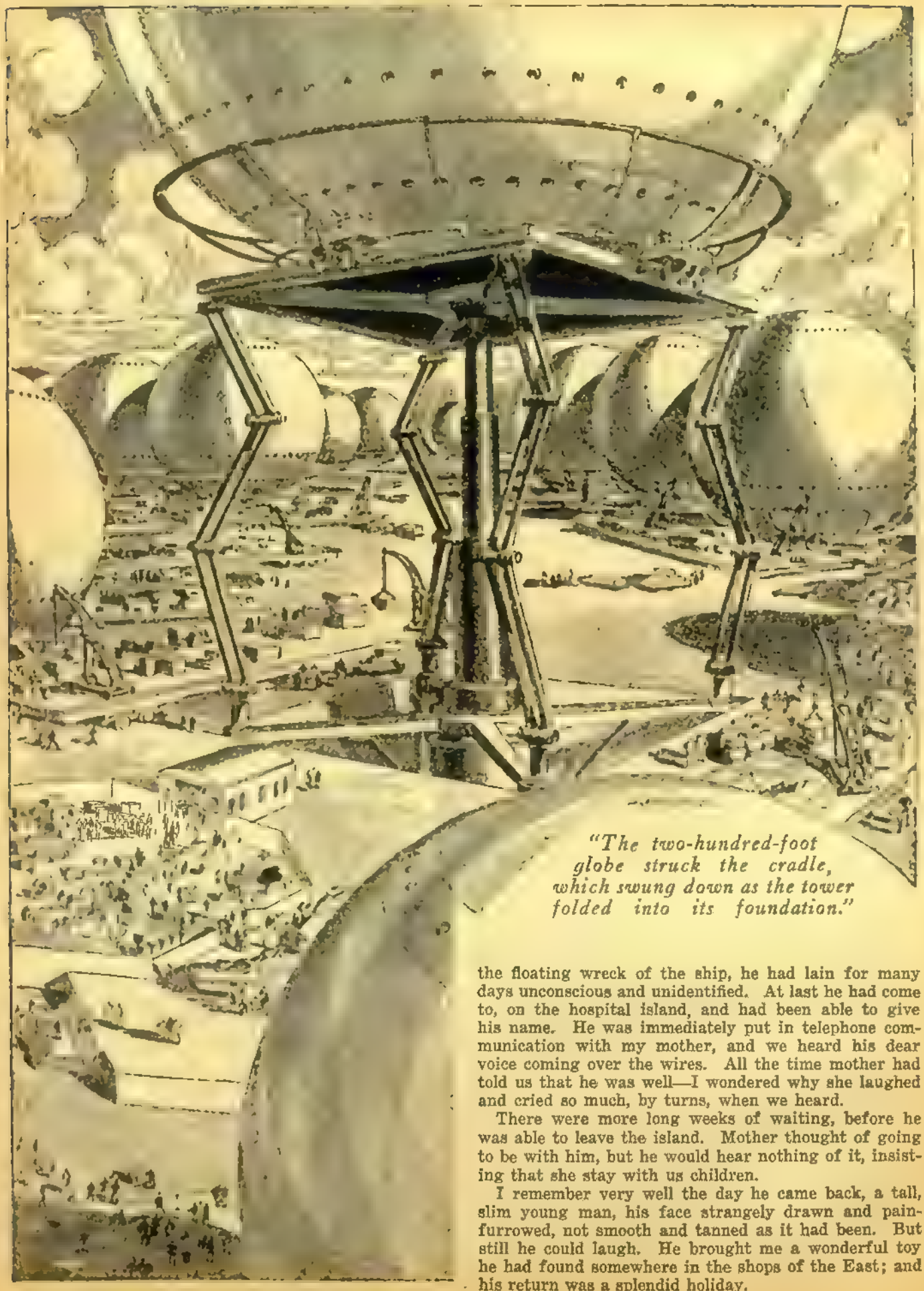
Tranco had to acknowledge defeat, since it seemed that everyone to whom Vardon had revealed his discovery had died with him.

It was several weeks before we heard from my father. Mother must have been in the most acute anxiety under the fear that he had been killed, but heroic woman that she was, she let Valence and me know nothing of it. It was long years later that she told me of the horror of her days of waiting, of the dreams of her restless nights. To us she was always gay and smiling, with the promise that father would soon be back.

At last she heard that he was on a hospital island off Borneo, convalescing from the effects of exposure to the D-ray. This ray, beyond its deadly range, produces severe burns, resembling those of the X-ray or of radium, coupled with temporary blindness and a curious nervous disorder.

Father was among the hundreds of wounded men picked up from the crew of a space flier that had been sent down in the last attack on the fortified floating island. His vessel had carried on after the side of it had been cut away by the disintegrator rays, and been the first to break through the screen-ray defense.

Picked up with his dead and wounded fellows from



"The two-hundred-foot globe struck the cradle, which swung down as the tower folded into its foundation."

the floating wreck of the ship, he had lain for many days unconscious and unidentified. At last he had come to, on the hospital island, and had been able to give his name. He was immediately put in telephone communication with my mother, and we heard his dear voice coming over the wires. All the time mother had told us that he was well—I wondered why she laughed and cried so much, by turns, when we heard.

There were more long weeks of waiting, before he was able to leave the island. Mother thought of going to be with him, but he would hear nothing of it, insisting that she stay with us children.

I remember very well the day he came back, a tall, slim young man, his face strangely drawn and pain-furrowed, not smooth and tanned as it had been. But still he could laugh. He brought me a wonderful toy he had found somewhere in the shops of the East; and his return was a splendid holiday.

It was several months before he was able to be up

very much—his convalescence was alarmingly slow. As the time for the sailing of the *Venus* drew near, his gaiety grew more forced, and even a child as I was, I realized that something was the matter.

But still my parents let me have the pleasure of packing and repacking my toys, for the trip to the moon. They did not tell me that the greatest specialists of the day were doubtful of father's complete recovery, that they thought he would never be able to stand the hardships of the long voyage to the satellite.

One splendid evening, he came down from the landing platforms with a triumphant smile on his tired face. He told mother of an examination by a great radiotherapathist, who had given him a new treatment, and promised complete recovery. He might even be able to start on the *Venus*, as we had planned.

At last came the month of August, and the week and the day of sailing. I remember very clearly my impatience, my delight when the doctors said father could go, the thrills of packing my baggage. My dearest possession, the little helicopter, had to be left behind, because it would be too heavy to fly in the thin air of the moon. But in the thrill of setting out, I was reconciled even to that loss.

We left the little bare room, that looked so strange with the familiar articles of furniture taken away, and ascended to the landing platforms. From there we went by air to the great landing place for the space ships, beyond the city. All the vast, strange space-port, with its whisper of machines and hum of human voices, its platforms laden with the bright metal ingots and the strangely scented bales of costly drugs from the moon, and stacked with the wooden crates of food and luxuries and machinery consigned to the lunar cities—the picturesque confusion of it all was a little terrifying to me, and I held mother's hand, while father carried little Fay.

Father showed our tickets at the gate, and as we went through I remember worrying about why we didn't carry our baggage along with us. We walked out on the vast, high-walled field, with the colossal, white ships scattered over it like titanic balls of polished silver.

A freighter was just coming in from the moon. The spidery steel framework of the landing platform was extended, a great slender tower in the center of the field, a mile away from us, supporting the great cradle five hundred feet in the air. With the others, I watched the morning sky above. A white speck, tiny and bright, drifted into the blue abyss. For a time it seemed to hang still in the sky, growing larger and brighter. At last I could see it as a tiny white ball, lit on the east by the morning sunshine until it looked like a little crescent moon, and veiled in the weirdly colored mists of the atomic blast which was checking its fall. Amazingly, it grew vast, dropping toward the platform. The two hundred-foot globe struck the cradle, which swung down as the tower folded into its foundation, yielding to the momentum of the mighty ship of space, catching it as a skilled player does a ball.

It takes a skilful pilot, indeed, to bring a space flier down on the ground, or on the rocky surface of the moon, without a wreck. But there is one class of men, the pirates and smugglers of the space-lanes, who, because they never have the use of elaborate landing towers, are perforce experts at it.

Now the cradle, on its great rollers, was moved off the platform, which had sunk level with the field, carrying the silver ship to the warehouses at the edge of the wide enclosure. And another cradle, with a vast argent sphere upon it, was moved to the platform top.

"That is the *Venus*," father said. "That is the ship that will carry us to the moon."

CHAPTER IV

The Voyage to the Moon

ODDLY enough, though it was all the most thrilling experience of my early life, I have no clear memory of our going aboard. I have but one or two pictures. One of the vastness of the mirror-like surface of the ship that bulged out above us as we stood at the base of the steps which reached up to the circular opening. Another, of the inside of the vessel, of huge, strange, naked machines, of great bare girders, of uncovered metal plates with rows of rivet heads, of sharp, bright lights blazing here and there in a gloomy confusion of exposed metal things. It was somehow like a forbidden glimpse of the vitals of some huge monster. And it all had a curiously topsy-turvy aspect—floors tilted or inverted, hand rails and ladders everywhere.

Then I remember the bare little room in the rim of the great wheel that formed the core of the ship. It was an amazing place to my young mind, with its two floors—one now a wall—with its beds, table, and electric stove fastened in place, yet ingeniously contrived to be tilted over for use when that vertical wall became the floor.

But soon the novelty wore off. We had but the single little room, reached by a sort of ladder from the elevator tube that was the axis of the ship. There were no windows—I could not see beyond the white walls lit by our single light. And it was very still.

I remember sitting there a long time, after we had come aboard, dangling my feet from the edge of one of the bunks, and watching my shadow on the unbroken wall. Father had gone out, and Valence had tagged along behind him. Mother was holding Fay in her arms, crooning to her. The strangeness and the stillness grew terrible.

When father and Valence returned, I learned that we had not left the earth. They had hardly entered from the ladder when a brisk metallic voice shouted from a little black disk on the wall,

"The *Venus* ascends in three minutes. Passengers are advised to prepare for the shock."

Father made us all lie down on the beds. Suddenly I felt immensely heavy, as the folding tower raised the cradle, catapulting the ship into the air. For many minutes the sensation of excess weight continued, as the atomic blast projectors were building up our speed to the velocity of seven miles per second, necessary to escape the gravitation of the earth.

Then came again the harsh, metallic voice from the wall,

"Warning! Acceleration is about to cease. The centrifugal wheel will be set in rotation. Passengers will prepare for the change."

Strangely, I felt myself grow lighter and lighter, until I almost floated off the bed. The sensation was strangely terrifying—I felt that I was falling headlong, that all about me was falling too. There was a peculiarly unpleasant sensation in my stomach.

Then presently I felt another force, that was pulling me out against the side of the room that had seemed a wall a moment before. Now, suddenly, it seemed to be down, and the other floor was vertical. Now I could see the need of the ladder that came down into our room from the center of the ship. The great wheel had begun to turn; centrifugal force was drawing us toward its rim.

In a few moments we were standing on that new floor. The force due to the wheel's rotation was only about one-sixth that of gravity (or about the same as the pull of the moon). It was intended not only to make it possible to walk naturally, to sit or to lie down,

to eat and to handle liquids, but to guard against that form of space-sickness which is caused by the reduced pull of gravity on the brain and the fluids of the semi-circular canals in the ear.

I tried to walk and made an amazing discovery. I sailed half across the little room, and fell sprawling on the floor, yet so softly that I was not hurt. When I had mastered my balance, I found that I could perform the wildest feats of jumping—I could float to the ceiling and sail down very easily.

But in half an hour, space-sickness began to come upon me, hastened perhaps, by my activity. I felt sickness and nausea, a horrible sensation of headlong falling, and a dull, intolerable ache in the head. I was too sick to eat—or even sit up—when a steward brought us food in a great vacuum container.

The ship's doctor came in. He was a fat, kindly man, with crossed eyes and a little red mustache. He laughed and joked with my father, and talked to me while he was taking my temperature. Then he gave me a dose of something bitter that had to be washed down with a glass of water, and told me to go to sleep, which I presently did, feeling utterly miserable because I was too sick to listen to his talk.

When I woke I felt a little better, though I had a leaden, throbbing ache in the head for many days, until my brain was accustomed to the lessened pressure of gravity. I found father and mother both sitting up, and mother was holding little Fay, who was crying fretfully. Valence had opened a trunk to get some pictures and bits of bric-a-brac to adorn the bare walls of the little room.

LONG days went by, measured only by father's watch, and by the time we slept, and by the coming of the man with the vacuum tubes of food. In a day or two, our bodies were largely adjusted to the lightened gravity; but another kind of space-sickness came upon us.

It was that due to the lack of vitamine J, which is found in natural air, but not in the artificial air of the space ships. It is thought to be formed by the action of certain unidentified bacteria working in green plants, and all efforts to synthetize it have been in vain.

The symptoms of this form of space-sickness are more severe and more alarming than those of the other. They include anemia, rapid breathing and palpitation of the heart, and a greenish hue of the complexion. Unless oxygen is administered, death is almost certain. And in spite of the best the doctors could do, fully one in twelve of the passengers to the moon at that time died of the malady.

Some have a higher natural resistance to it than others. My parents and Valence and I were only slightly affected, and the kindly old doctor assured us of our safety. But the case of little Fay was more serious. He shook his head doubtfully when we asked him about her.

Several times the good fellow stayed with the sick child and sent the four of us to the deck for exercise. We climbed the ladder to the hollow axle of the great wheel, and then—utterly free of weight— we drew ourselves along it to a great metal floor at the top of the globe. All about the edge were tiny windows.

I remember looking out into space—deepest midnight flecked with flashing stars, an abyss of utter blackness, in which the many-colored stars swam cold and motionless and very bright. Father pointed out the earth. It was a huge globe of misty green, splotched with patches of startling white. I asked to see the sun, was told that it was so bright that it would blind me to look upon it.

I believe that it was on our fourth day out that a strange ship was sighted. The sunlight, gleaming on the polished shell of a space ship, makes it visible telescopically for hundreds of miles; and we passed far around the stranger. It seemed to be hanging still, as though waiting; and the officers feared that it was a pirate of space.

It did not pursue us, but our change in course was probably responsible for the accident that did take place. The men at the telescopes were watching the strange ship and a meteorite struck the ship.

I remember the thundering crash of the collision, and the sickening lurch of the ship. Then there was a thin, whistling scream, the sound of our precious air hissing out into space. For a moment that was the only sound; then I heard a medley of shouts of alarm and screams of terror from the passenger quarters about us in the rim, and the stern commands of the ship's officers.

Fortunately, the inner shell of the ship had not been seriously torn, and soon the break was repaired. Mechanics in space-suits went out through the air-locks and replaced the reflector surface which had been ripped off by the glancing blow of the hurtling stone.

The worst effect of the accident was the psychological one. The blow had been very sudden. No man knew when another iron wanderer of space might come tearing into the ship. The nervous strain grew intolerable. Many of the passengers grew hysterical under the strain, and there were two suicides.

I remember meeting the family in the next compartment. They were poor people—farmers who had left the great Iowa plantations of the Food Corporation. The father, two grown sons, and a daughter had bound themselves to work long periods for the Metals Corporation, to pay for the passage of the family. They were honest, cheerful people, and some degree of friendship sprang up between our families.

But in these long, lonely days in the crowded, uncomfortable compartments, when every passenger was suffering somewhat from space-sickness, and from the ever-present fear of meteoric collision, there was little room for social pleasures.

The earth seemed very remote; one felt almost as if it had ceased to exist. All the world of men, that once had been of such vital concern, was gone. The life that we had known seemed a fading page of half-forgotten history. The cramped ship, with all its discomforts and terrors, was the only real thing. It was almost as if we were dead and in the tomb.

Hope—the Mecca of the Moon—was all that made it endurable.

My little sister, Fay, was still sick. For long weeks we cared for her, hoping that she would last until the end of the voyage would bring a chance for recovery. But on the nineteenth day, when we were but three days from the satellite, she died.

In the two years that she had lived, I had come to love her very dearly, and her death—when at last I understood what it meant—left a dull, restless pain in my heart. All the night after, mother sat crying, and father walked up and down the room, with a strange drawn look on his face. But after that, they showed little outward signs of grief.

There was another funeral—there had been many of them during the voyage. With the few friends we had on board, we gathered about the little wrapped body on the great metal deck above the rotating centrifugal wheel. The captain of the vessel, a lean, hard-faced man, read a short service. Then men in oxygen helmets and space suits took up the tiny coffin, and carried it through the air lock, and tossed it outside. Watching it through the thick windows, we saw it explode violently as it shot out into the vacuum of space.

There were three more long, sad days. The nervous strain, the loneliness, the monotony, the sensation of separation from all humanity grew almost intolerable.

Then the broad face of the moon widened out very rapidly before us. It was very welcome, for all the rugged cruelty of its sheer mountain and rocky desert. A strange world, of midnight shadow and blazing sunlight. The sun's rays are not diffused by the thin air of the moon; the shadow of a mountain is a world of chill night, even when there is bright, hot daylight all about it.

A great city of the moon was soon in view. It was Theophilus, situated in the crater of that name, before the three great peaks that tower up three miles high in the center of the crater. Here my parents had elected to make their beginning in the new world. Standing on the white rugged plain, that was cut with ragged fissures, pitted with miniature craters, blazing in the white sunshine, the vast city of glass seemed very bright and beautiful—like a great diamond lost in the desert.

We swept lower over it, over the miles of unbroken roof of transparent glass, that protected the city from the cold of the night, preventing the escape of its vital air, and shielding it, as well, from the heat of the midday sun.

How strange it was to see little white-clad figures moving over that vast roof, or over the swarthy deserts about it, to see the dark specks of machines crawling over the slender white roads that radiated from the city's air-locks! Human beings like ourselves!

We neared the landing field that was like a harbor to the city. Our ship dropped into the cradle on the slender tower, was safely lowered to the surface. The voyage was at an end.

CHAPTER V

Life on the Moon

IN a few hours we were walking through the strange streets of Theophilus. A vast contrast it was to the gloomy monotony of the space flier! The streets were straight and wide, and bright with the sunlight that streamed through the glass roof supported on the tops of the pyramidal buildings. The wide-spaced structures, of opaque glass and stone and metal, were neat and brightly colored. Below their many-windowed walls were strips of the unfamiliar lunar vegetation—strange shrubs, great fantastic trees, vividly colored of leaf and bloom, lending a breath of sharp fragrance to the cool air.

At every corner was a passage through which one could descend to the endless moving ways, that carried passengers and goods beneath the streets.

How good it was to see the sunlight, the strange gay buildings, the vivid, flowering plants! And the people, strolling or hurrying, happy or sober, vivacious or silent! It was wonderful to be near humanity again, to feel in touch with its joys and cares.

After we had breathed the fresh, cleanly fragrant air for a few hours, the weakness and the misery of our space-sickness vanished. Soon father had found rooms for us, in a great building similar to the community hotels of the earth, in which we had regular automaton service.

It was early in the fortnight-long lunar day when we arrived, ten earth-days before the sun set. (The twenty-four-hour period of the earth's rotation has continued to be the most convenient measure of time on the moon, for the spinning earth hangs like a great dial in the lunar sky.) It seemed very strange to me to go to sleep in our pleasant new room with the sun still shining, to wake and find its mellow rays still flooding the bright, weird vegetation of the park below my window.

Valence stayed with mother, while father took me with him on his trips about the city, and out into the mountains. He told me much about the life and organization of the moon, of the two other great cities, Colon and New Boston, of the rule of the Moon Company, formerly a branch of Metals Corporation, and now owned by the incorporated cities of the moon.

During the long voyage our bodies had become pretty well accustomed to the decreased force of gravity, but now we had to become acclimated to the lighter barometric pressure on the moon. During the two weeks of the lunar night, when the air freezes on the mountains, the barometer falls almost to zero; and even during the day, when the sun has evaporated the frozen air again, the pressure is only a small fraction of that of the earth's atmosphere. For several weeks we were under medical care, and were compelled to spend several periods in the compression chambers, where, in a synthetic atmosphere of oxygen and helium, with a pressure approximating that of earth, the distressing symptoms—pain in the lungs, gasping, panting, and also palpitation of the heart—were relieved, and the oxygen in our blood streams was replenished.

The Moon Company had offices in each of the three great cities of Theophilus, New Boston, and Colon, which were the only points on the moon at which landing towers had been constructed for space ships. At first the agents sent out from earth had, as a matter of course, enjoyed autocratic power over the moon. But during later years, the increasing number of free colonists who owned their own mines, hired their own labor from human or Selenite, and sold their own metal, had developed a spirit of freedom which had resulted in the local ownership of the Moon Company stock, which resulted in comparative freedom.

The Board of Directors of the Moon Company, composed entirely of lunar citizens, took part in the city governments, in the erection and maintenance of the glass roofs necessary to prevent the escape of the air at night, and bargained with the agents of Metals to keep up the prices paid for the product of the lunar mines and farms.

Owing to the freezing of the air at night, there was no life or travel outside the cities or the mines after the sun went down. Mine owners, farmers, ranchers, and prospectors, gathered in the cities during the long nights, to enjoy the fruits of their toil. The streets were thronged with rough-clad men, and there was much of amusement and gaiety.

This condition had prevented the spread of humanity evenly over the moon; people were gathered compactly in the three great cities, where they were directly under the eyes of the Metals Corporation's agents, and where their voices might most influence the Directors of the Moon Company.

From the air-locks of each great city, smooth highways spread out over the lunar deserts in a network that ran over mountain and crater, connecting all the human settlements on the moon. With the coming of day, these roads were crowded with the atomic-powered "automobiles" of farmer, miner, and prospector; and soon a regular stream of great trucks laden with metals and ores and farm products was flowing back to the city.

The Selenites, the native creatures of the moon, indeed ruled its surface by night. Their cunning had led the warlike tribes—the Ka'Larbah, M'Dawils, and others—to a policy of hiding by day, in the deep caverns and rilles, to come out upon marauding expeditions, when night had driven men to the cities. Many of

them, however, were regularly employed to work in mines and crater forms, even to police those at night against their raiding fellows.

I remember very clearly the first one of them I saw. It was on the moon-day of our arrival, while father and I were strolling about the strange streets beneath the glass roof, absorbing the wonders of the odd stepped buildings, the weird vegetation, and the gathering crowds of moon-folk.

The monster came striding down the street. It was oddly like a great red elephant on stilts. The body was huge and flimsy, covered with the rough red skin. The legs were incredibly long and slender, and the trunk-like tentacular limb hung down from the great head, almost to the pavement. Above the trunk, the three huge green eyes, large as plates, were glowing expressionlessly from beneath a horny red carapace.

The thing came on past, swaying awkwardly, yet moving with amazing speed. As it passed, the great flat eyes were turned toward us for a moment, and the trunk swayed up and down in an odd manner—a gesture of greeting, as I afterward learned. The moon-calves have little sense of hearing, and only rudimentary organs of speech; they communicate largely with motions of the long, snake-like trunk. The settlers imitate their sign language with their hands, and so get on with them after a fashion.

Slung over the broad scaly back of the creature was a sort of saddle of some rough fabric, in which I saw a few bags of synthetic flour and sugar—the moon-calves are inordinately fond of all carbohydrates, and invariably demand them as pay for services rendered to the colonists. And these carbohydrates have an intoxicating effect upon them, frequently leading even those ordinarily peaceful to the perpetration of bloody outrage.

WE had been on the moon ten days when night fell. The sun, sinking ever so slowly, crept behind the mountains. At once the world was dark, and swiftly it grew cold. A light fall of frost and snow silvered the desert, and soon the mountains were capped with frozen air.

The air-locks of the city had been sealed, and the great atomic lights filled the streets with a soft radiance that shimmered on the glass above. Atomic heaters kept the city warm, and still the streets were gay with the vivid hues of the strange vegetation, and the warm, pure air fragrant with the exotic odors of it.

From the streets, through the transparent roof, we could see the earth, far to the northeast of the zenith. Four times as far across, it seemed, as the moon had seemed when I saw it from our old home, and of a color that is indescribably beautiful—a soft, liquid green, with the vague outlines of the continents dimly visible through a film of misty emerald fire. A broad crescent of it was bright with sunlight, the other side dark in shadow, with the region between lit with soft rosy colors of incredible wonder.

There is terror in the fall of a lunar night, though in the warm city I hardly realized it. Awful eternity beckons in the deliberate sinking of the sun. As the blue luminary nears the rugged horizon, it becomes a deep and bloody red. The sapphire infinity of the sky is clouded with gray mists of condensing vapors. Cold, formless fogs obscure the emerging stars, and blue icy mantles shroud the bloody sun. Darkness falls as sere vegetation snaps and crumbles under the weight of drifting snow, swept on a bitter wind. Then the stars burst through, hard and motionless; and the earth-shine shimmers cold and still upon a world of rugged mountains, beneath a crust of snow and frozen air.

Dreadful is the fate of a man caught in the night. For hours, perhaps, he has been walking, careless of the passage of time. Night catches him, and he becomes a queer thing, armored stiff in a crust of ice, struggling pitifully, hopelessly.

The realization of danger is abrupt. It is like a physical blow, that dazes, and leaves him stupid and trembling. He feels a sudden great weariness, a weakness in the limbs; and his heart beats high in his throat, with painful pauses. He stares dully at the crimson sun, unable to credit his fate.

Then he perceives the sudden coolness, and the chill of his own perspiration. He starts frantically, runs, with heart beating so high that it chokes his breath. The first snow-flakes dance lightly past him, or strike, white and feathery and very chill, against his face.

He goes insane with terror. He leaps madly across the empty desert, screams for aid until the loneliness of the mocking echoes appalls him into silence. And suddenly he finds that he is exhausted. He stumbles and cannot rise. And he lies there for the moment, panting and chilled, he tells himself that he must be calm, conserve his strength.

When he rises, the sky is already gray with frozen mist, and the red sun is gone. He hurries on, gauging his leaps to keep his strength. The mists swirl about him, and dull throbbing pains creep up his shivering limbs. His face feels as if set in a frozen mask.

And now his heart pauses with the horror of a new discovery. He is lost! Snow swirls up in the wind about him, hiding the familiar peaks. With a sobbing cry, he stops; but the piercing lances of the cold drive him on.

He runs again, madly, with no sense of direction. His heart pounds, his lungs ache. But his face and hands and feet are becoming mercifully numb; they throb with dull, leaden pains, but feel curiously detached.

He is exhausted again, with the fatal heaviness of fear. His body shrieks out for him to stop. He fights on, in wildly frantic spurts. The wind howls about him, thin, laden with fine, cutting particles of ice, unthinkably cold.

He stumbles on. Darkness deepens. He cannot see. Is it the night? Or his eyes? Vague images—fragments—flash through his mind. His mother's face, white and still. A half-forgotten novel. A yellow dog he once had loved.

He stumbles, falls into a drift of powdery snow. It feels warm, delightful. Dimly, he realizes the peril of it. He tries to rise, feebly, cries out. The relentless wind whips away his voice, drives him down.

Hope is dead. Realization brings dreadful agony. He makes a frightful effort, oblivious to the pain screaming from his body. He cannot move!

In a few hours the body is frozen hard as metal. There it lies, in the hideous horror of that last frenzied convulsion, until the moon-calves come—scarlet, elephantine things, hopping beneath jeweled darkness from crag to snow-capped crater-rims, over a world white and still and dead, shimmering in the cold white light of earth.

More than once, in my life on the moon, I have been near that fate.

During the long night, my father mingled with the miners and farmers who were in Theophilus for a holiday. He took me with him into clubs, restaurants, stock exchanges, offices and lobbies. And a few times we blundered into secret dens where there was mad music and wild song, with painted women and haggard men, reeling under the influence of drugs smuggled from earth and the stranger things from the crater forests of the moon.

It was just outside one of the latter resorts, I think, that he stumbled on an old prospector, who claimed to have discovered a wonderful mine in the region to the north, named by the old astronomers *Mare Tranquilatis*, "Sea of Tranquillity." (The colonists and explorers, in the main, have respected the nomenclature of the ancient selenographers.)

The old fellow from the desert—Jenkins was his name—had squandered or gambled away the proceeds of the ore his Selenites had packed back from the mine, and was in dire straits. He was a short, heavy fellow, his skin burned to a fiery red that matched his yellow hair. Father offered to look at his prospect, and advanced the old fellow funds to feed himself until the coming of the sun. I saw him several times, and took quite a liking to him—though mother did not approve of my being with him. He regaled me with tales of weird adventure; and presented me with a curiously carved piece of rock crystal—a really valuable curio—that had been used as a tool in one of the lost cities of Selenite culture.

WHEN day was coming, father took me with him to one of the towers of the city to watch the rising sun. Before and below us spread the vast desert, rugged, rocky, broken with crack and cliff, covered with a blanket of snow and frozen air that shone white in the bright earth-shine. Above the sharp, ragged edge of the desert, the black sky was sprinkled with cold stars, motionless and bright.

In the east was a cone of misty luminescence—the zodiacal light. Suddenly the uppermost pinnacles of the mountain below that vague glow sprang into dazzling white radiance, and the intensely white rim of the sun crept up among the stars in the east. The desert became a plain of shimmering silver flame, crossed with the midnight shadows of the three mighty peaks just east of the city.

All about, as far as my eye could reach (the horizon on the moon is appreciably nearer than on earth) mountain and plain, all crystal white, stood out with a sharp and motionless distinctness, with a clarity and vividness of outline, that one who had always lived on earth cannot conceive, with the steady stars still burning in the black sky above.

But soon, as air and moisture began to evaporate in the unchecked rays of the sun, faint veils of blue and purple mist floated up about the distant peaks, and the sun was surrounded with a misty golden halo. The sky faded from utter blackness to a deep ocean blue, with the brightest stars still discernible in it.

In an hour the sparkling blanket of frost was gone, and the blue and yellow rolls of fog that had briefly obscured the moonscape were dissipated by the driving heat of the sun. Stripped of its prismatic mantle, the swarthy desert lay naked before us, revealing the blackness and the grim cruelty of volcanic rock, the fantastic shapes of twisted lava flows, the innumerable tiny craters, and the vast monotonous sweep of cracked and broken plain, that stretched away to the towering crater walls.

The sun had not been up twenty-four hours when father and the prospector, Jenkins, left the city on the road that leads across the Lake of Death toward the Sea of Tranquillity in the north. They rode a little metal saddle on a "civilized" moon-calf—a monstrous, scaly red creature called M'Ob, of which Jenkins seemed very fond.

They were gone over a week; it was near sunset when they returned. Father, who was a trained mining engineer, had been pleased with the prospect, had bought it. During the next lunar day, he was very busy, making plans to work it, buying machinery and hiring men. When day came again, he left Theophilus with three great trucks that carried D-ray mining machinery, supplies, and the six men he had hired—he was depending on getting moon-calves for most of the labor. He took several tons of carbohydrates to pay them, and had employed a man with a thorough knowledge of their various dialects.

He had bought a great atomic disintegration ray machine for boring shafts, and a number of the smaller, pistol-like tools for working around bodies of ore, and detaching fragments of it. The disintegrator ray, or "D-ray," is based upon Orloff and Smith's great discovery of four centuries ago. Matter under it suffers atomic disintegration, being converted partly into pure energy, with the liberation of a great amount of heat, though most of it is transformed into the inert gases, helium, neon, argon, krypton, and xenon, which, when the ray is used in mining, escape harmless from the shaft.

When father returned at the close of the day, he reported that the machinery had been installed and that the best of progress was being made in getting the work under way. He had been compelled to build fifty miles of road to reach the nearest highway—cutting through obstructions with the D-ray, and leaving a smooth, glassy pavement of fused rock.

He worked very hard. After he had quarters in the mine-shafts which he could inhabit during the night, he stayed on with his task, paying us brief visits during the day. Before the end of the year the trucks were beginning to haul metal from the mine in quantity.

The prospect had originally been for gold alone. Vast quantities of that metal there were, but great deposits of platinum, iridium, and osmium ores were struck at a depth of a few thousand meters. Since the three metals of the platinum group were the only ones that had been successfully used in the atomic blast projector, they commanded the highest prices paid for any metal save radium. Soon the mine was known as one of the most valuable on the moon.

A year after we had landed at Theophilus, Father had been able to construct a glass domed building on the hill above the shafts, in which we might live as comfortably as in the city. Mother and Valence and I were moved out there, and it was there that the happy days of my youth were spent.

CHAPTER VI

In Which I Grow Up

UNTIL I was ten or twelve years of age, I seldom left the vicinity of the mine. Remotely situated in the great plain of the "Sea of Tranquillity," it was much apart from the rest of the moon-world, and as the mine grew, father's buildings became a little city in themselves.

The mine-shafts opened into the floor of a low-walled crater, some two miles across. A smooth, white road connected the little metal domes above the shafts with the great smelter and refinery that had been built in the center of the circular valley.

The great buildings in which we lived were located on a little hill just north-east of the crater—a wide, rambling town, enclosed in glass. Always it was the first point lit by the rising sun, when the flat desert about was still shrouded white in snow and frozen air, and lost in the shadows of the night.

Mother christened it "Firecrest," because of the way it glistened in the blaze of sunshine when she first saw it, as we came out in the automobile. Our little city, and the mine itself, came to be known by that name.

Sometimes I went with Valence and my parents on a business or pleasure trip to Theophilus—it took only a few hours to run the three hundred miles in our slender, torpedo-shaped automobile with the Orloff atomic engines. A few times we saw one of the "stereo" pictures from earth, which, in the wonders of natural color, perfect sound, and life-like depth, gave us children some knowledge of the planet of our birth.

But those trips were rare and great occasions. For the most part we lived at Firecrest, very simply. During the long, hot days, I was free to wander about the wild desert, inside the square of forts my father had erected to guard against the raids of the wild moon-calves. For long hours at a time I wandered about, climbing hills, exploring craters and rilles and caverns, thrilling over the discovery of strange bits of mineral in the hope that I was finding rare elements. I crept about in the rank, thorny, gray-green vegetation that sprang up in the craters, tasting strange fruits, and stalking the weird little creatures that roamed the spiky forests.

In other words, I was a normal boy, leading on the moon the natural life of childhood that I might have enjoyed on earth. Sometimes—and quite naturally—I got into difficulties.

My greatest adventure of childhood came one day when I stumbled upon the entrance to one of the great caverns that honeycomb the moon. It had the narrowest of openings, a slender crack between two great boulders, not five miles from "Firecrest." Thrilling with the romance of discovery, common to all youth, I wriggled through, and explored the crack.

As I crept along—nerves atingle, trembling with excitement, yet not quite frightened—the fissure led down and down, widening as it went. I stumbled along in darkness, over the coarse sand of a subterranean waterway, ages dry. It must have been a half mile below the entrance that it widened out into a vast space, an amazing, strangely lighted chasm in the moon. A half mile away from me, and far below the bare ledge from where I viewed it, was a lake of black water. And about the lake was a weird forest, of *luminous* vegetation.

Dense jungle rimmed the lake, a jungle of the strangest plants known to science, the light-emitting flora of the caverns of the moon. Stranger of form than the spiky growth of the craters, the plants glowed with soft steady fire. Great, fleshy trees seeming to burn with dull blue light, huge mushroom-like things shining with a deep green incandescence. Slender, graceful, fern-like fronds glowing with a vivid scarlet radiance. A jungle of flowing flame!

For a long time I stood and watched. I had heard of phosphorescent forests, but this was the first I had ever seen. There was nothing unnatural about it, I knew; the plants merely supported colonies of luminiferous microörganisms similar to those found on earth. Yet the alien beauty and the weird wonder of it wrapped me in amazement.

For a long time I looked; then, lost in the strange spell of the place, I left my point of vantage, and clambered down over a slope of water-weathered rock, until I reached the edge of the jungle. I broke off thick leaves glowing with cold blue light, and slender stalks burning with violet and green, and a handful of the soft feathery fronds that shone with crimson fire. I wandered about the shore of the black lake, making myself a bouquet of flame.

Then I heard a sound that made me drop the splendorous glowing thing in a panic of sudden fear, a sound that froze me as I stood, with stilled heart and indrawn breath. An animal sound it was, a sort of grunt that ended in a whistling intake of breath. Then there was a rustling in the plants, that came *toward* me.

I saw a single purple eye, large as a man's head, and shining with cold flame, that rose slowly above the glowing plants where the sound had been.

THE shock of the sight galvanized my unnerved limbs, and I turned and fled in mad fear. I tore a blind way through the flimsy glowing plants, stumbling over rocks and scrambling desperately to my feet to plunge on again.

At last I stopped, from sheer exhaustion. I was torn, bleeding, stained with black mud and luminous vegetable juices. Hot and panting, I threw myself down on a bare rock. When at last I was able to raise my head and look around, I saw the luminous thickets closing all about the bare boulder on which I lay. In the feeble light, walls and roof were invisible.

I stood up and shouted. There was no echo! The darkness swallowed my voice. Abruptly, I realized the vastness of the cave, and my foolishness in entering it alone. I realized my smallness, my weakness, the futility of my efforts.

I restrained an impulse toward another mad flight, and sat there a while, very soberly considering my chances—and finding them very slight. Then I climbed off the rock, and set out deliberately to find a way out. For a long, long time I wandered, breaking through luminous forests, stumbling over dark, rocky underground plains, running into boulders, falling into pits.

Always afterward, when I look back upon that dreadful time, it has seemed more nightmare than reality. I have no connected memory of it, only vague pictures of endless ages of exhausting effort, of growing hunger and torturing thirst, and of fear that was maddening. I know that sometimes I found black pools and drank, and I must have eaten some fruit of the weird vegetation. And my sleep ever since has been troubled with visions of huge black-winged things, with luminous eyes, circling ominously above me. For hours at a time I lay trembling in hiding from them.

I slept several times—or at least lay insensible, when I was too exhausted to move again. I had no ideas of direction, no plan save always to follow the passages that seemed to lead upward.

My ultimate escape must be credited rather to chance than to anything else. For the thousandth time, I thought I saw the gleam of daylight, struggled to it with hope and fear struggling in me, and walked into a beam of sunshine that fell athwart the rocky floor.

Above me was a sort of sloping chimney, large enough for a space flier to pass through, with a patch of deep blue sky in sight beyond. I clambered up it, crawled out into a strange little crater, grown up with a forty-foot forest of olive-green, spiky scrub, and lit with hot sunlight. The sun was low in the west. It had been morning when I had left Firecrest; I had been underground for a week!

I forced a way through the thorny undergrowth, and clambered out of the little crater. Looking about from a little eminence, I saw the glass-armored buildings of the city, blazing in the splendor of the sunshine, fifteen miles to the west. I was a full dozen miles from the hidden entrance I had found.

Five or six hours later, I stumbled into Firecrest, little better than dead. My parents and Valence received me with unbounded joy. They had scoured the country for me, finally had given me up as a victim of a raiding band of the wild moon-calves.

I told no one but my parents and a few selected friends of the vast cave; and it was a secret that was to prove an important factor in the moon's war for independence.

That near-tragic adventure ended the careless days in which, alone or with a book, I had wandered about

the crater, lost in dreams. I suffered a long sickness, induced in part by exhaustion, in part by my reckless meals on the fruits of the luminous plants. It was some months before I had completely recovered my strength; and during a long convalescence I did a great deal of reading, becoming intensely interested in studies, science especially.

As soon as I felt able I entered the little school at Firecrest, which father had established for the benefit of his employees' children. After a few years there, I was sent off to the university at Theophilus, where I took a general scientific course, specializing in intra-atomic engineering.

BY that time, father was one of the richest men of the moon. Firecrest, inhabited largely by his employees, was a city of some ten thousands in population. He had acquired a sort of fame for justice and honesty, for generosity toward his associates and workers. His wages were the highest paid on the moon; he was one of the few mine-owners who had built a glass-covered city for their men.

His character, one of almost puritanic sturdiness and independence, had been of little use to him on earth; but he was appreciated under the less restrained conditions of the moon. He had become respected and influential throughout the satellite, a leader and adviser when important questions were to be considered.

Several times, in matters of dispute between the colonists and the agents of Metals Corporation, in regard to the interpretation of contracts or prices paid for metal, he had interfered—through his influence, the Moon Company had been able to secure more generous treatment for many a poor miner. For several years he had been a leader in the Board of Directors of the Moon Company.

It was through his influence that permission had been obtained to set up a synthetic food factory on the moon, for the Food Corporation of earth was jealous of its monopoly—the Corporation had had a small plant at New Boston for years, but the new concern was privately owned, and turned out vast quantities of food, at lower prices. He had also financed other manufacturing concerns that would tend to make the moon less dependent upon the earth, and had encouraged and aided the farmers who were struggling to grow the vitamine-containing fruits and vegetables that cannot be produced in factories.

Entering the university was a great event for me. It was a vast institution, for the moon numbered among its students thousands of young men and women from all the colonies. Located in one of the huge, sunlit, southern towers of Theophilus, with verdant parks about it, it was a delightful place of beauty.

The atmosphere was free and democratic. In my childhood I had been very much alone, self-sufficient and caring little for the society of others. But here I found myself among crowds of happy youngsters, who accepted me as an equal, without thought or inquiry concerning my station in life outside. I felt that their friendship would have been quite as real and genuine, if I had been a common miner's son, instead of the heir of one of the planet's leading citizens.

One of the most pleasant features of my school life was the friendship I formed with the Warrington family. George Warrington, who was a score of years older than myself, came of a family that has been outstanding for generations; and he held an important position in the Board of Directors of the Moon Company. Father had met him and won his friendship; thus it was that I was a frequent guest at his home.

Warrington was a kindly, friendly man, of simple tastes and quiet manners, though those who did not know him intimately, were apt to complain that he was unduly stiff and formal. He was a courteous host; it was delightful to bask in the genial warmth of his great intellect and noble character.

His wife was a simple mannered, cheerful woman, with keen, vivacious wit and a great and tender heart. She was beautiful to my eyes, and a second mother to me when I was lonely or homesick. There were no children in the family; perhaps for that reason, I was more welcome to the great, majestic rooms.

It was at dinner there one evening that I first met Benjamin F. Gardiner. His name was well known to me, as to the rest of the two spheres, for his brilliant work in science and philosophy. I was dazzled into diffident silence at meeting one so renowned, though there was nothing overwhelming in the appearance of the stooped, scholarly man, then somewhat past middle age. His quiet, gentle manner inspired only friendship, respect for his deep intellect, love for his great heart. Several years before he had given up the management of the manufacturing enterprise that had made him wealthy, to devote his time to scientific work for the benefit of mankind.

I had an automobile of my own, a small one, but as speedy as any that had been designed. Frequently I went home to see my sister and parents; and I spent much time traveling about the moon, visiting the other great cities, New Boston and Colon, the one in "The Sea of Clouds," near the crater Herschel and at about the center of the lunar disk as seen from earth, the other at the base of the Appenines, on the edge of the *Mare Serenitatis*, or "Sea of Serenity." I toured thousands of miles of smooth highway, visited fantastic and awe-inspiring natural wonders of the moon, and hung about the space-ports, where the great silver globes were landing with food and manufactured goods from earth, or departing with metal from the mines of the moon.

During one long moon-day, with a band of the more adventurous of my schoolmates, I traveled to the end of the roads in the south. We left our machines and went on afoot, on a prospecting expedition toward the great Doerfel mountains beyond Tycho. We had minor adventures enough, and once fought for our lives against a band of the wild Ka'Larbah.

But the greatest adventure of all my college career was one that came within the walls of Theophilus, and during the fourth and last year of my stay there. It was a girl, tall, dark-haired, beautiful. She had not the easy, familiar manners of the ordinary co-ed; she was inclined to be aloof, reserved, and silent.

I went to no end of pains to get an introduction to her. Her name was Mary Jons; I could learn nothing else about her. A few times I met her alone in the corridors or classroom, and on one memorable occasion she consented to go with me to see a "stereo" picture. At first, she seemed inclined to be friendly. I found, during our few meetings, that she had a keen, sparkling wit, a deep and genuine culture, and a wide knowledge of both earth and moon. But she told me nothing of her past life.

But on the day after we had seen the picture, she was somehow changed toward me. She was reserved, self-contained; a barrier had come between us that I could not break down. When I stopped her in one of the great halls, she left me suddenly, seemed angry and suspicious when I followed. The next day I found that she had left the university.

And do my best, I could not find Mary Jons at all. Whence she had come and where she had gone were equally puzzling. I could not even find anyone who

knew her better than myself. Presently, after I had spent a few thousand credit units for private detective work, I began to doubt that her name was Mary Jons at all.

CHAPTER VII

The Fate of the Sandoval

MY college education was done; with a mind filled with impossible dreams of a dark-eyed, wistful girl who had called herself Mary Jons, I went back to the home of my youth—back to lonely Firecrest, standing isolated in that vast tract of grim, forbidding wilderness inappropriately called the "Sea of Tranquillity." I was to live with the family, and learn the mining business.

During boyhood I had been much about the mines, and having the natural inclination toward science that had led me to choose an engineering course in the university, I found nothing difficult about the work. After the careless college years, I really enjoyed the soberer discipline of the long days in the bright, sunlit office, or in the cool, gloomy shafts, with their intricate mazes of conduits for power, for air and water, and for the escaping gases from the D-ray boring machines. I continued my scientific studies, too, fitting up a little laboratory about the mine-buildings, and having books sent from earth.

But often at night—and even by day, when I should have been at work—I saw a pair of dear, dark eyes before me, or glimpsed a fading face, with its bright, eager smile. I grew restless, with my dreams of Mary Jons. Perhaps, if I should go to the earth . . . I had no idea, really, where she was. But I imagined that she must have flown back across the void, because I had failed to find her on the moon.

The wonders of a trip back across the gulf to the planet of my birth had long appealed to me. I began to ponder it seriously, to imagine that I might meet the dark-haired girl at the space-port, or in the ways of New York. At last I resolved to speak to my father about it.

But before I had done so, something happened to turn my attention to affairs nearer home.

For a long time there had been difficulties between the Moon Company and its terrestrial superior, Metals Corporation. As I have said, the Moon Company had at first been owned outright by Metals. But the thrifty colonists, with a view to profit and to liberty, had bargained for stock in the Moon Company, when they were making a mining contract, or disposing of a cargo of ore. Gradually the incorporated cities—Theophilus, New Boston, and Colon were the leaders, though nine others, including Firecrest, had been admitted to the corporation—secured the ownership of the Moon Company stock, in order to be able to conduct their local affairs without interference from the agents of Metals.

That is, the entire ownership of stock in the Moon Company had passed into the hands of the colonists. When first organized, this company had possessed in fee simple, "the Earth's satellite, known as the Moon, with all mines, manufactories, smelters, refineries, and all other buildings and improvements, of whatsoever kind, that may be hereafter erected thereon."

It was, however, quite evident that the Moon Company did not own such mines as those of my father's, which, in fact, it had never claimed. On the other hand, it did own and operate some of the largest and most productive properties on the moon, and it had built and controlled the great cities and the vast systems of highways about them.

The whole situation was rather complicated and confusing, for Metals Corporation still insisted on tampering with the affairs of the Moon Company. And it ruthlessly enforced its monopoly on trade with the moon, its battleships of space ramming any other vessel found in the lanes.

In this year, when I returned home—it was 2326; I was then twenty-four years old—a great change took place in conditions on the moon. It was due to the growing sense of independence of the moon people. The synthetic food factories and the crater farms seemed a success; it looked as if the satellite might be able to look after herself, with little help from the Metals Corporation.

The Metals officials still apparently considered the moon a valuable property, to be made to yield a good revenue, not a growing nation, to be justly governed. It still insisted upon the purchase of metal on the moon, at prices set by its own official, refusing to permit private trade with the earth. This trade monopoly, and the dependence of the colonists on imports from earth, was evidently intended to keep the moon in subjection, even though the colonists controlled the Moon Company.

For years it had been known that the prices of metal on the moon were about a third of those at Pittsburgh. But the colonists had a deep love for the Metals Corporation, an abiding faith in the wisdom and the justice of its Directors. They considered their own debt to the Corporation, for their protection in an alien world, and for means of communication with the planet of their fathers. They thought of the perils faced by the ships that carried the metal to earth. And the ingots had been regularly sold to Metals, at the price it wished to pay.

But in 2324, prices on all metals were uniformly and arbitrarily lowered by ten per cent, for no stated reason other than that Metals wished to increase the power of her great space-fleets. The corporation insisted that the colonists were bound to sell their products to her, and at whatever price she thought just. And the moon, she said, needed the protection of the fleets.

THE result of the reduction of the prices of metal was a protest in unison from the people of the moon, that they were quite willing to build and equip ships of their own, and under the command of the Moon Company, but that they objected to supporting a fleet of vessels maintained largely to keep an unjust monopoly on commerce.

There was, at the time, no hint of rebellion, merely the gravest of petitions from the Directors of the Moon Company. But Metals proceeded to put the reduced rates into effect, and miners who refused to accept them found their warehouses guarded by watchmen with D-rays, on the alert to see that the ingots did not fall into the hands of smugglers.

The important result of all the confusion, with the practical suspension of trade while the boycott went on, was a great amount of discussion, and the revival of keenest public interest in the charter of the Moon Company.

A few patriotic spirits, of whom Warrington was a leader, got in touch with most of the stockholders of the Moon Company, who were scattered all over the moon. Later in the year several score of delegates met in Theophilus to hold an Assembly of Directors, the greatest that had been held since the stock passed out of the hands of the terrestrial holding company.

A small gathering it was, perhaps, but one of earnest and able men, burning with zeal for the cause of liberty and justice on the moon. Warrington was there, lofty, devoted and brilliant man, who had been in youth an

The great round vessel, rather clumsy at best, and heavily laden with metal, fell an easy victim to the slender, modern, cigar-shaped warship of Metals.

officer in the space fleets, where he had learned the modern art of war. He had more recently won distinction in a long campaign against a rebellious army of the wild M'Dawils—one of the most blood-thirsty tribes of Selenites—defeating them in a brilliant battle near the Hercynian Mountains, on the border of the moon. Gardener was at the meeting, the profound philosopher, clear-headed, practical, far-sighted. Henry Patrick was there, the youthful orator whose later fiery speeches in every lunar city did much to inflame the moonfolk with the spirit of revolution, and my father, John Adams, an able, influential man, skillful financier and sincere statesman.

The old charter of the Moon Company was examined and discussed. Quite explicitly, Metals had granted it the full ownership of the moon, with all the mines and cities upon it, as well as the right to protect its territorial rights by force of arms, to build space fliers and to carry on trade with earth.

These latter provisions must not have seemed important when the charter was drawn up, since the Moon Company was to be only a subsidiary corporation to Metals. But now, even though Metals had never recognized the independence of the moon people, these old charter rights seemed important guarantees of freedom.

After a long and rather stormy session in one of the great auditoriums of Theophilus—there were many so loyal to Metals that they felt it an act of treason to question the wisdom of its government of the moon—the Assembly passed the "Assertion of Right."

That famous document merely sets forth in simple language the claims of the moon people to the rights and privileges of self-government, of free ownership of mines and cities, and of freedom of commerce with the

earth, as granted in the charter of the Moon Company.

The document was sent to the Directors of the Metals Corporation, at Pittsburgh, as "an humble petition from your loyal colonists on the moon." The answer was simple and decisive: Under the present system, the moon had prospered for two centuries. Why change it?

And the same ship, that brought back that answer, carried orders that no metal was to be purchased for more than the new low price, and that anyone storing metal about his mine, or attempting to ship it to other points than the great space-ports, was liable for prosecution for smuggling.

With the arrival of the news, an electric wave of excitement ran over the moon. There was much wild talk of war and independence, and below it the awakening of the new ideal of liberty went steadily onward.

In January, 2325, the Assembly of the Directors of the Moon Company met again, in a new session that was to last for six long years, until the end of the greatest war of history.

These men again discussed the Assertion of Right, and in a few days passed the "Assertion of Equality," on January 24, which has since been celebrated as the birthday of the moon's liberty. It stated that the Moon Company was a free and independent corporation, of rank and power equal to those of any, and entitled to her representatives on the United Board of Directors.

At various times in the past, when there had seemed to be need of protection against the pirates of space, the cities of the moon had advanced funds for the construction of space ships, which had been built in the Metals shops at Pittsburgh, and commissioned in the name of the Moon Company. There were perhaps a half dozen of these vessels with the fleets of the Metals Corporation—it was upon one of them that Warrington had served. They were the property of the Moon Company, and usually manned and officered by men from the moon, though they sailed under commands of the admirals of earth.

One of the first acts of the Assembly had been to declare these ships to be under its immediate authority, and to command them to land at Theophilus, to await the orders of the directors of a sovereign corporation. Five of them soon appeared above the glass walls of the city. Technically they had mutinied in leaving the fleet; they were refused landing space at the space-port, though the admiral was too uncertain of the temper of the moonfolk to take more drastic action against them. They came down, with some little damage to equipment, in the desert, a few miles from the walls.

The Assembly, in order to test its claimed rights of commerce with the earth, announced that one of the ships would sail for New York at once. Thousands of tons of metal were piled up in the warehouses of the city; there was no difficulty in getting a cargo.

On February 6, 2325, when the sun was not four days high at Theophilus, thousands gathered in the streets and on the roofs to watch the departure of the ship, the *Sandoval*. The rest of us had come with father to attend the Assembly meeting; I was among the cheering, madly gay throngs upon the broad glass roof. It was a motley crowd, of white-clad farmers and grimy miners, of grimy mechanics and brightly attired society folk, haranguing one another, singing patriotic songs—people of many races and of a hundred trades, but all welded into one by the new born spirit of freedom.

Far to westward lay the silver space ships upon the swarthy desert, like globes of gleaming white quicksilver scattered upon a dark rock. The sunshine was hot and bright, painting the ships with silver flame, setting them forth very vividly against the black shadows of the hills behind them.

Faint clouds of many-colored mist swirled up about one of the argent spheres, and very slowly, it seemed, it was lifted into the air. A great shout—a human cry that rolled over the city's roof like the roar of a breaking sea—arose with the ship into space.

In a few minutes the vessel was out of sight to the naked eye; but still the throng waited, not a mere excited mass of people, but feeling the pulse of awakening nationality, fused into a single unit by an awakening spirit of patriotism.

The *Sandoval* was still within good view of the telescopes that project by the hundred from the towers and domes that rise a little from the city's vast expanse of level roof, when the catastrophe took place. There were a hundred observers; and the whole city knew of the outrage a few minutes after it happened.

The outbound *Sandoval*, fifty miles above the city, was rammed by a warship.

The great round vessel, rather clumsy at best, and heavily laden with metal, fell an easy victim to the slender, modern, cigar-shaped warship of Metals. As a silver arrow might pierce and burst a bright soap bubble, the battleship sped upon the *Sandoval*, ripping it open with an armored prow.

Several hours later, it was reported that a mass of wreckage, laden with dead men and precious metal, had fallen beyond the three great peaks in the crater of Theophilus. But before that time, all the moon knew of the deed. And many a man, who had thought little or not at all of his relation with the earth, felt a sudden fierce desire for liberty.

On that day, the independence of the moon was born.

CHAPTER VIII

The Radium Raid

THAT cruel and deliberate outrage, the ramming of a ship of the Moon Company's as if it had been a common pirate, set the planet afire with a flame of resentment. For the first time in the history of the moon, its inhabitants began to think of independence, to wonder if they could lead an existence without the commercial relations with the earth, without the protection of Metals Corporation.

Much was written and spoken on the subject in the next few weeks. One anonymous author published a series of eloquent and fiery appeals for liberty, called *The Parting of the Ways*, which were eagerly read and widely quoted. The unknown author—who, I afterward had reason to suspect, was none other than my own father—made a powerful plea for lunar independence.

The moon, he pointed out, had a population as large as the membership of several of the corporations of earth, and a wealth far greater than that of any, measured in natural resources. Certainly, he said, the moonfolk were as progressive, thrifty, and intelligent as any on earth; certainly they were capable of self-government.

The moon, he argued, was no longer dependent upon the earth for any necessary articles. The factories in the great artificial caverns below the cities turned out every variety of manufactured article, from clothing, metal goods, and building material, to drugs, medicine, and synthetic food.

The mines of the moon would not only supply all her needs in the way of metals, but their output was so indispensable to the industrial life of earth that the mother planet would be compelled to resume commerce in the end. Economically, the earth was dependent upon the moon, far more than the moon depended upon the earth.

The farms, in crater and atomic-lighted cavern, would

furnish sufficient quantities of vitamine-containing fruit and vegetables. These, so long the principal importations from earth, would no longer compel commercial relations with the mother planet.

In one of the last of his papers, the daring author went so far as to suggest the possibility of a successful war with the Metals Corporation. The earth, he pointed out, would be at the vast disadvantage of maintaining a military force at the distance of nearly a quarter of a million miles from home, while the interruption of commerce would deprive it of the source of metals upon which its military strength is so largely based.

And if the moon people, he concluded, were not trained soldiers, they at least had had considerable military experience in the many bloody wars with the moon-calves; they were used to hardship and danger; they were familiar with the natural features of the moon's topography. And if they were lacking in weapons of war, there were the great D-ray tubes used in boring mine shafts—powerful enough to bring down a space ship miles away—and the smaller pistol-like tubes used by individual miners, which would be useful hand weapons.

As might have been expected *The Parting of the Ways* aroused the keenest disapproval of the agents of Metals. The papers were ordered suppressed; such copies as could be gathered up were destroyed; and a reward was offered for the author, dead or alive. But despite the best of their efforts, the writer remained unknown—it was only after the death of my father, years later, that I found among his possessions the plates, from which the outlawed papers had been printed. And all the moon read the tattered little pamphlets that were secretly passed from hand to hand.

Few, who knew my father, might have suspected him of the authorship of those terse, powerful challenges to rise to action, ringing with a brief, emphatic eloquence, simple, throbbing with sincerity and truth. For he was an aging man, an invalid who had relinquished to me much of the management of the business. He had recovered completely from his injuries in the war of 2307. While he was not able to take an active part in the war on the moon, he had more to do with it than was commonly known at the time. His heart was as strong as any patriot's, and he did his part, despite an aged and suffering body.

As the people of the moon read the timely article in *The Parting of the Ways*, and pondered upon the ramming of the *Sandoval*, there slowly crystallized a definite spirit of unity, that grew firmer in the conviction that the moon need no longer lean upon the long arm of the Metals Corporation.

The new spirit was first definitely shown in the "Radium Raid," an incident which took place in New Boston, about the middle of the year.

The Metals Corporation had clung tenaciously to the lowered schedule of prices, despite the boycott of the moon. It was the boast of the new party of independence that not an ounce of metal had been sold to the Metals since the ramming of the *Sandoval*.

That had meant hardship to the moon people, for if no metal had gone to the earth, Metals had seen to it that no merchandise had been shipped to the moon. The people had accustomed themselves to doing without coffee and a few other luxuries that were not produced on the moon, and large subscriptions had been raised to assist miners who faced ruin for lack of a market.

Nor were the disadvantages all on one side, for on earth a thousand industries depended on the metal and other products imported from the moon, and the suspension of commerce cut off their raw material. There was a vast pressure upon officials of Metals to raise the prices and resume trade, but they stubbornly held to their point.

As the year went on, it developed there was in the warehouses at New Boston a shipload of radium, consigned to the Metals Corporation at Pittsburgh. The agents of Metals had purchased this radium after the new low rates had gone into effect, but before the boycott had brought an end to trade. Late in June a space flier landed at New Boston, to take on the metal. The situation was a delicate one. Metals had already bought the metal. But according to the terms of the compact among the moon people, no metal was to be permitted to leave the planet until the prices were raised.

Public excitement ran high. The lead chests were carried out of the warehouse, and the loading went on. The Assembly of Directors was still in session, and the question of whether the ship should be allowed to depart was fiercely debated. Its sailing meant the breaking of the boycott; the radium would relieve the present industrial crisis on earth. Yet the metal had been sold; it seemed the duty of the sellers to let it go.

But public opinion ran high against the sending of the radium. It was argued that the Corporation might at least pay the old price, since the boycott had trebled the price of radium in Pittsburgh. In spite of that, on the last day of June, a messenger came from Theophilus with the news that the Moon Company officially sanctioned the departure of the vessel.

A vast crowd had assembled around the ship, to watch the loading of the lead drums that contained the precious metal. There had been some rather violent demonstrations of popular feeling, and the port authorities had had some difficulty in keeping order. But when the messenger arrived with the news that the ship was to be permitted to depart, and that he had delivered to her commander the clearance papers he had brought from the Assembly, the throngs dispersed and returned to the city.

It was almost sunset. The vessel was scheduled to depart in a few hours. The metal was all on board, the laborers were returning to the city, before the cold would come, and the crew were still busy, getting the cargo in shape for the voyage.

Just as the sun was sinking, and the black shadows of the mountains, chill forerunners of night, were racing across the desert, a band of men suddenly appeared out of a marching shadow and rushed upon the vessel. They were grotesque figures, unrecognizable in the metal armor of space suits.

The air-locks and hatches of the vessel had been open and unguarded. The vastly outnumbered crew of the flier was taken by surprise, just as the last drums of radium were being stowed in place. In a few minutes the raiders had over-run the ship. The crew was disarmed, herded into the strong-rooms, and locked up.

The cylinders of radium salts were speedily unloaded. Just what became of them is not historic certainty. It seems that outside the vessel they were given to a band of moon-calves who vanished with them into the chill mystery of the gathering night.

A few hours later, when the irate commander of the ship had forced a way out of the strong-room, radium and raiders alike had vanished. The ship rose at once, and got into communication with the patrol fleets. The surface of the moon about New Boston was combed, but all efforts to recover the lost metal proved in vain.

News of this daring act on the part of a few, determined citizens of New Boston spread like wildfire over the moon. The whole planet waited tense for the reply of Metals.

CHAPTER IX

The Declaration of Independence

AT the time of the "Radium Raid," father and mother and I were in Theophilus. We had been there, in fact, since the convening of the Assembly early in the year. The mine was shut down, since the boycott had stopped the sale of metal.

Father regularly attended the Assembly meeting in the great hall. To the influence of his great wealth was added men's respect for his sturdy character, lofty honor, and ideals based upon deep human feeling. He was among the leaders of the Assembly.

It was my privilege to go with him daily to the meeting place, as a sort of confidential clerk and stenographer. I shall never forget the long sessions in the dark, cool hall, when its lofty vault rang with impassioned pleas for liberty and right, or whispered an echo to the calm, sober opinions of such men as Warrington and Gardiner.

During my university course I had done extensive work in science, and a few things I had done during my graduate year had attracted a little attention outside the institution. I was pleased beyond measure to find that Dr. Gardiner had read of my work. Several times I met him, to talk over scientific topics—for the brilliant physicist never let such trivial things as politics or wars stop his work. I was among the honored three whom he chose to have present when he first performed his famous experiment with the focusing of the shorter Hertzian waves—from which he later developed such momentous results.

Toward the end of August, disquieting news came from New Boston. A fleet of nine great warships, of the cylindrical type chiefly used in the earth's atmosphere, had arrived from Pittsburgh, under the command of General McRan. The fliers had landed at the space-port, and disembarked an army of some ten thousand men, which had taken possession of the city.

The General—a crabbed, autocratic old fellow, according to reports—set up his headquarters in the Diamond Gardens in the middle of the city, shutting the citizens out of that famous museum and amusement place. His men patrolled the streets, rode the ways, and stood guard at the air-locks and roof doors. Guards were placed about factories and places of business. New Boston was under martial law, and warnings had been posted that anyone denouncing the administration of Metals, or expressing sympathy with the Assembly of the Moon Company, would be arrested on charge of treason.

The city was compelled to quarter McRan's troops, and to feed them as well as the five thousand men on the space ships. The protest of citizens and directors only evoked the old general's opinion that martial law was too light a punishment for the city of the Radium Raid.

Yet, McRan had not come to pacify the planet by force. One of his first acts after seizing New Boston was to send messengers to Colon and Theophilus with orders for the agents of the Metals Corporation to raise the schedule of prices to the former level, and even to offer premiums to compensate the miners for losses suffered during the boycott.

But these advances were met with scorn. Such methods might have been effectual even a year before, for the cities of the Moon had had little life in common. But the events of the past few months had crystallized a moon-wide spirit of self-dependence that was not to be broken by such an attempt at bribery.

When he learned that this move had failed, McRan's next step was to threaten that if the moon-folk did not yield and resume shipment of metal to the earth, he would bring enough ships and men to the moon to seize all the cities and starve the inhabitants into working the mines.

The choleric old fellow's threat was a match to powder. Men who had before talked only of just prices and charter rights now talked of liberty and independence. The militia began to repair the old weapons used in the endless wars with the moon-calves, and to devise new machines of destruction. The city governments of Theophilus and Colon ordered the great D-ray boring machines used in the nearby mines brought up and put in position for defense against space ships.

During that time the Assembly of Directors was meeting daily at Theophilus. There were many among the members anxious to declare the independence of the moon and begin a war with Metals. But older and wiser men—among them such distinguished statesmen as Gardiner, Warrington, and my father—realizing more clearly the terrible cost in human life and human pain that war would mean, were determined not to take the fateful step until the earth should force them to do so.

McRan had lost no time in seizing the machinery in the mines under and near New Boston. A part of the ray machines had been brought up and placed in strategic positions about the city, to forestall a possible rising of the citizenry. He also attempted to work the mines with his troop, though their ignorance and clumsiness brought on so many accidents that he gave that up.

He had been on the moon nearly a month before the first battle was fought in the long and terrible war to come. On September 23, 2325, when the sun was near the zenith, five hundred of McRan's men left New Boston to seize the machinery in the Peacedale mine, which is located fifty miles west of the city, near the edge of the crater of Hipparchus. Most of the force was infantry, though there were a dozen great ray tubes, drawn by tractor tanks.

The plan had been known to the citizenry several hours before the troops left the city. Some loyal and fervent patriot, whose name seems not to have been recorded, succeeded in getting out of the city through the ventilator tubes—the air-locks being guarded.

HE reached the Peacedale mining district a dozen hours ahead of Major Harley and his Tellurian soldiery, with news of their advance. To the miners, long used to being called upon to defend their possessions from moon-calves or space pirates at a moment's notice, there could have appeared but one course of action.

What that course was, Harley found, when his troops met half a hundred grimy miners drawn up in a line, behind a row of atomic boring machines, on the steel bridge that had been erected across the great crack, or rille, three miles from the mines.

Harley tramped out before his men, and ordered the miners to disperse. They refused, stood calm before his threats—his language seems to have been of a rather violent tenor. Fuming with rage, he got back behind his caterpillar tanks, and ordered his troops to fire.

The first burst of flaming rays killed half the miners upon the bridge. Their weapons were not ready; the focusing of a D-ray is rather a delicate process. But the survivors stood calmly adjusting their weapons after their companions had fallen under that pitiless volley. But at last, when the vivid streaks of red and green and yellow leapt from their rude weapons, nearly seventy-five of the close-ranked terrestrials fell. By

that time, Harley had his tanks ready for action. They replied with a fiery burst of narrow rays that left hardly a score of the ragged miners on the bridge—and most of them wounded.

Still the little band refused to give way, though they might have found easy shelter in the rocks behind the rille. They kept the great rays flaming from their clumsy machines. Harley was actually forced to fall back a little. Finally his lumbering tanks forced a way across the bridge—but not until the last of those miners had fallen behind his improvised weapon.

The troops had sustained a loss of more than 150 men; and three of the tanks had been wrecked. But Harley pressed on without delay. As he went, he found himself exposed to a continual bombardment of atomic rays. Enraged miners and farmers, hiding in crack and rille and crater-pit, were using their familiar tools to a deadly end in the new trade of war.

The Tellurians marched on to Peacedale, but reached it in a very much demoralized condition. One of the shafts was taken after a hot and bloody encounter, that convinced Harley that the miners could fight in earnest. A little machinery was destroyed, but the retreat began almost at once.

That retreat ended in becoming a mad flight. Again and again the harried and demoralized troops fell into an ambush or were swept by D-rays from a peak or cliff that rose beside their route. The remaining tanks and the heavy tubes had to be left by the way; and Harley reached the air-locks of New Boston with little over a hundred men.

Before the sun had set, an atomobile had arrived in Theophilus with news of the battle. That night, there was a long debate in the Assembly chamber. Before the meeting adjourned, it had taken the most momentous step in the history of the moon.

The assembled Directors of the Moon Company voted that the moon was now, and by right, a free and independent Corporation, to whose liberties the presence of McRan in New Boston was an insult inexcusable. That declaration of independence marked the birth of a new nation. Before the moon had been merely petitioning justice. Now it demanded it.

On the following day, the Assembly met again, made an appropriation of five million credit units to defray the expenses of the war, and issued a call for volunteers to fight for the freedom of the planet.

By the middle of October, bodies of men were gathering in Colon and Theophilus, as well as in the dozen smaller places, such as Firecrest, where there were permanent populations, to go to the relief of New Boston.

On the first day of November nearly twenty thousand men were assembled in the vicinity of Peacedale. That horde of raw recruits, without officers, without discipline, without arms and equipment, without military training, even without adequate shelter against the lunar night, was far indeed from an army. But it did have the single vital quality—unfaltering devotion to the cause of liberty.

On that day, the Assembly made Warrington the Commander-in-Chief of the armies of the Moon Company. The day after, my old friend left Theophilus on the lonely road toward Peacedale, confidentially facing a terrific task—the organization of an enthusiastic mob of miners and farmers into an army, with which to face the well armed, battle-seasoned veterans of McRan.

My own fortune was bound up with his. At his request, and with the permission of my aging father, I had become his "engineer-attaché"—a sort of confidential private secretary and scientific adviser, rather than a military man.

I wrote a letter of farewell to Valence. Three years before she had married Tom Dowling, a brilliant young fellow who had risen—and before his marriage at that—to be general manager of the Firecrest mines. They had stayed there when I came with my parents to Theophilus; my last view of my sister had been as a young matron, with a red-headed child at her knee.

I pillowed the silver-haired head of my mother upon my shoulder. For the last time, I feared, I held her dear slight form in my arms. Tears were rolling down her faded cheeks; but her eyes were brave and bright as she kissed me farewell.

And I left her—my last memory is of a slight whiff of the faint lilac perfume she had always used, that is associated with so many of my dearest recollections.

Father gave me a crushing handshake, a sincere kiss, and a few heartfelt words of parting.

That night a swift closed atomobile left Theophilus, on the long lonely road to the meeting-place of the mountaineers at Peacedale. I was at the wheel. Beside me was Warrington. We were setting out on a great task, that was to lead us many times into hardship and peril, into sorrow and pain, into strange adventures and terrible situations.

CHAPTER X

The Battle of Meteor Hill

THE sun was low over the black mountains that ring the Theophilus crater, when Warrington and I left the city. It was only a matter of some twelve hours until sunset would bring its killing cold; and we had seven hundred miles to go. Warrington had been urged to pass the lunar night in the comfort and safety of the city, but he wished to be with his army. It was a dangerous choice he took, for we had been able to get no space suits; the slightest accident or delay would be fatal; if we did not reach our destination by the time the sun left the sky, we would never reach it.

The atomobile in which we drove somewhat resembled the ancient vehicle propelled, not by efficient and certain atomic power, but by the old clumsy and unreliable internal combustion engine, the motor car called the "automobile."

That is, our machine had four wheels, with flexible tires, supporting a narrow, tapering, cigar-shaped body. The space within the little shell was rather cramped, but luxuriously fitted. There were seats, storage space, and the little white panel with the buttons which controlled the motor. The engines were little devices in the hubs of the wheels, hardly the size of a man's fist. The outside of the shell had been silvered, and it was lined with a non-conductor, making for comfort during a wide range of temperature.

Nevertheless, it would be fatal to be caught out in the lunar night. Not only would the unbelievable cold penetrate the machine, but the freezing of the air would leave one to suffocate, even if he could keep warm.

For that reason, I made the best speed I could down the long white road. Built of fused rock cast in place, it was level and hard. But owing to the extreme irregularity of the moon's surface, it was far from straight. It curved about peaks and craters, zig-zagged up mountain slopes, dropped into valleys.

It was a lonely road. We might travel a dozen miles, or a hundred, between the scattered mines. Once we stopped at a little settlement. It stood on a low hill—a serried row of glass-armored towers and domes, with squat metal shaft-houses below. A great D-ray mining machine was being dragged across the plain toward

the town—to be set up for defense, I suppose. A motley group of people were assembled about the tractors that were pulling it. And a hundred men or so, in ragged nondescript uniforms, were being drilled below the walls, marching and wheeling enthusiastically.

We got a bit of lunch, and had the waiting mechanic oil and inspect the machine. The genial keeper of the little inn recognized Warrington. He refused any pay, and ran out to spread the news. We departed with a cheering throng of miners speeding us on.

As the silent, racing machine shot swiftly over the winding road, the scenery changed rapidly about us. Cruel slender mountains and grim mysterious craters flashed into view as we topped a ridge or rounded a curve, and grew swiftly, swung and wheeled about us, dwindled, vanished behind. The moonscape changed, yet it was always the same—lofty, ragged mountains, broad, black volcanic deserts of twisted lava streams, burned, cracked and rugged, strange circular craters, walled with sheer grim cliffs—all intensely bright where the sun's rays struck it, or hidden in a startling, rayless obscurity of shadow.

To drive was an exhausting task, to sit there alert, forcing the machine to the limit of speed the road permitted, sometimes, it seemed, escaping disaster only by the narrowest of margins. But I rather enjoyed it—the perfection of the machine, the ease of its answer to the wheel, the intoxication of boundless power at my fingertips. Even the danger added zest.

An hour after we had left the mining town, we had a near catastrophe. At one point, at the foot of a long slope, the road passes through a narrow gorge. As we entered, we came suddenly upon a rough wall of boulders piled across the roadway. Instinctively, I pressed the brake-button. The machine checked its speed, but still maintained momentum enough to pile us in the front end of the car when it struck.

We clambered back to the seat and took stock of the situation. We were both bruised somewhat; Warrington had an ugly contusion on his temple with blood oozing from it, and I had a skinned side. But we were not seriously hurt. The machine refused to respond when I pressed the buttons; it seemed to have been injured the most.

"Look there," cried Warrington, who had been looking out as I tried the controls. "The Moon-calves!"

I looked through the broad round windows. A half-dozen great scarlet monsters were approaching, hopping like colossal fleas through the yellow, spiky scrub that covered the mountainside — moving like red fleas the size of elephants. It was a band of wild moon-calves, whose elementary cunning had led them to try this method of wrecking machines in the hope of spoil—of which human bodies would have been the most attractive item.

Fortunately, we carried pocket D-ray tubes. They were light weapons, their focal range limited to two hundred yards; but serviceable in such a case as this. Warrington covered the Selenites on one side, I covered those on the other. He gave the word, we pressed the contact levers. The narrow red rays reached out, intense and brilliant.

And the great creatures fell as the scarlet fingers touched them.

We must have killed four or five. There were a score in all, or more. The others leapt away into the endless thicket of brown, thorny scrub, now dry and sere in the lunar evening, and were lost to view. We got out. Warrington kept watch and cut the boulders out of the way with his ray, while I tinkered with the injured motors.

In an hour we were on the way again.

DURING the latter course of the war, the roads were hardly passable at all, due to such barricades and ambushes. Military dispatches were carried mostly on friendly Selenites, the lightest tractor tanks being used when the moon-calves were not available, though they were not half so rapid.

We had no more serious accidents. The sun was still half the breadth of its disk above the horizon when we reached Peacedale. An odd scene, it was, to be the camp of twenty thousand men. Only a rugged, cracked crater-plain, half a dozen miles across, with a few little shaft-houses of metal and glass standing here and there about it, with the white ribbon of the road running from one to another.

We left the machine and were eagerly welcomed by the guards from the shaft-house by us. The black shadow of the crater walls was leaping across the floor, and already we felt chill in the thin bitter wind that blew out of the shadow toward the bright, sunlit mountain on the eastern side, carrying a few fine flakes of snow upon it.

We were conducted down into the shaft. For all their lack of organized discipline, it seemed that the men had been making wise and energetic preparation for the long cruel night. Heavy metal doors had been arranged, where they were not already in place, to confine the precious air in the passages. There were atomic heaters and lighting systems. Equipment had been provided to purify the air by condensation, and there were tanks of liquid oxygen to replenish the vital element. The greatest difficulty had been in the matter of food supplies, but sufficient rations had been obtained for a month at least.

Within an hour after our arrival, the passages had been sealed, and we had begun the long fortnight of complete isolation from the rest of humanity. Warrington worked for long hard days, organizing the men into companies, and teaching them to use the slender D-ray tubes as skillfully as weapons as they had used them as rock disintegrators.

In my capacity as engineer-attaché I was busy enough, superintending the control of the intricate system of machinery that kept our mine-shafts habitable, and as well, working on the details of the changes to be made in the great D-ray rock-borers, to adapt them for use in war.

When the sun went down, it had been a mere rabble of men that crowded into the mine-passages. When the long night was ended and they emerged, it was an army, already whipped into a single unit, responsive to the will of a single man, organized and taught the first lesson in discipline.

As soon as the driving rays of the sun had cleared the sullen mists of evaporating air and frost, Warrington moved the new army out of the mines, and marched on New Boston. For the most part, the men who did not carry the standard D-ray pistols bought during the long wars with the Selenites were equipped with the small portable rock-disintegrating D-rays. Most of the men, too, had been provided with white uniforms, pith helmets, and smoked glasses, so that they would be able to march in the open by day. We had a sufficient number of atomobile trucks to carry the commissariat; and there were two hundred of the great ray-machines, drawn by tractors, that I had been able to convert into terrible instruments of war.

We came in sight of New Boston before the sun was a day high. Its glass walls and towers, flung over hill and valley, were a splendid sight in the sunshine, with the naked black mountains behind them. We located our camp perhaps eight miles east of the city, and cut off from it by the elevation known as Meteor Hill,

which rose about midway between us and the city with the space-port beside it. In the little valley where we stopped, the olive-green vegetation was just putting up slender tendrils that in a few hours would grow to the impenetrable spiky thickets of the amazing forests of the lunar day.

Warrington had his plan of siege well worked out. Within a few hours, half his army, with almost a hundred of the great mining tubes, was flung out in a ring, fifteen miles across, that circled city and space-port. His next move, undertaken while the first was yet uncompleted, was the occupation of Meteor Hill.

From this eminence, his rays could sweep the city and the space-port at will. With eight thousand men and the remaining hundred of the huge ray-tubes, we marched up the hill. Some opposition had been expected, but only a few surveyors and engineers, who were apparently planning fortifications upon that strategic point, were encountered.

In full view of the city and the ships, our men fell to work with a will. It was only a matter of a few minutes before the pocket D-rays had cut deep trenches in the hill-top, from which the army was not easily to be dislodged.

It seems that the terrestrial commander had intended to occupy the hill "as soon as temperature had moderated sufficiently." It is said that he was thrown into a rage of anger to find that Warrington had marched fifty miles to seize a position before he had thought it safe to leave the city walls. This was the first hint that under lunar conditions, Warrington could best the terrestrial generals, even though they were distinguished veterans.

I was with Warrington when we took the hill. I remember standing by him, after we had cut the pits for the tubes and placed the weapons in position, looking down upon the city. It spread over the vast, uneven plain below us, with the vast, towered glass roof blazing diamond-like in the sunlight, enlivened by colored ornaments and gay pennants that hung above the towers. Just below the city was the space-port, where the nine great war-fliers lay, gleaming like nine polished cylinders of silver.

Later in the war, fleets of the more efficient globe-shaped vessels appeared on the moon.

IT was not long before we saw a good deal of activity on the rocky plain below our point of vantage. Scouts reported that great masses of troops were leaving the city and gathering in canyons and ravines below the cliffs at the foot of Meteor Hill.

Our tubes were hardly more than in position when great tongues of blinding light—scarlet and green and yellow—reached up toward us from the walls of New Boston, and from the ships in the port. The color of the D-ray depends on the one of the three metals, platinum, osmium, and iridium, from which it is derived. Slender, flickering fingers of intense livid flame played up and down our lines. Rocks and creeping vegetation, men and weapons, before them burst into momentary incandescence and faded away, disintegrated, melted into nothingness. McRan had gone into action.

Our own tubes replied at once, with a great curtain of wavering light, firing largely upon the space fliers, for to sweep the city was to kill friend with foe.

In a few minutes thin lines of white-clad men were seen below, running up the hill, ray-tubes in hand. The Tellurians were storming our position. Warrington ordered the great tubes to be depressed whenever possible, to cover the infantry advance. As soon as the troops were in range, the hand weapons were put into action.

Meanwhile, the dazzling narrow rays played up and down our lines, sweeping down those caught exposed, and slowly cutting away the solid rock before our trenches. The section of the hill we occupied was slightly crescent-shaped. The Tellurians formed in the hollow of the crescent and charged up the hillside in thin, scattered lines, firing flaming rays of red and green and yellow as they came. It was a heroic attempt—those veterans from earth knew how to advance into certain death, if need be.

In a few minutes the front line of the terrestrials came over the brow of the hill. The fire from our great tube could no longer meet them, and a desperate hand-to-hand conflict raged all along the line.

Our standard—it was merely a blue square of cloth, bearing a white crescent—was cut down by a D-ray. The confidence of our men might have fallen with it, but for a young lieutenant named Andrews. He sprang boldly out of the trench, seized the rude flag, and stood holding it up, exposing himself to the flaming rays, until the tide was turned. As the terrestrials retired to form again, he fell, decapitated. "Remember Andrews" became a rallying cry for the rest of the battle.

Warrington had only a few minutes to reorganize his defense before the attackers had formed their ranks again and returned to the storm. For ten hours the fighting went on. Sometimes the terrestrials won a way even into the trenches, but the cry "Remember Andrews!" seemed to raise even the fallen to drive them back.

At last, a definite retreat was made from the hillside. Exhausted, half our men fell asleep in the trenches. But Warrington went tirelessly about the task of consolidating his position. More trenches were dug, more great D-ray tubes moved up from the camp. And our flaming rays fell in an unbroken storm upon the ships in the space-port, and the batteries that protected that and the town.

Our position commanded the port and the town. On November 17, 2325, General McRan loaded the remnant of his troops on the six of his war-fliers still able to move, blew up the other three, and left New Boston.

The air-locks of the city were opened, and jubilant throngs poured out and up the hillside to welcome the men of the deliverer. The excitement and rejoicing was incredible. In spite of all that Warrington could say, men felt that victory was already won.

And the victory had real value, even if enthusiasts were inclined to over-estimate it. Even sceptics had been shown that the moon-folk could engage the veteran troops from earth on equal terms, that the chance for liberty was at hand. The prestige of Warrington and of the Assembly grew immensely. Supplies and reinforcements began to flow toward New Boston from all inhabited regions.

But, as Warrington said again and again, war had just begun.

CHAPTER XI

The Eagle of Space

IT was October 3, 2326. Nearly a year had passed since the battle of Meteor Hill. Van Thoren's fleet had come from the earth—half a hundred mighty globe-ships of space; and Humbolt's army had replaced McRan's—fifty thousand seasoned veterans from the guards of the Corporation.

For a year, Warrington has matched his inexperienced and poorly armed recruits against that overwhelmingly larger force. He had marched here and there about the moon, from city to city and from mine to mine.

He had fought half a dozen battles. None of them were victories, yet he had never been decisively defeated. His greatness had been shown by his skill in avoiding overwhelming forces, in striking when he might demoralize the enemy with but little danger.

With a matchless tactical skill, he had evaded Humbolt's and Van Thoren's traps again and again, miraculously contriving to reach a city or a great mining district in which he could find refuge, when they had left him to perish in the night upon a desert.

As a matter of course, the Tellurians controlled the skies; they were the masters of space. That gave them great advantage; they could move their troops easily and at will—and they received a stream of supplies and reinforcements from earth, without which their campaign must quickly have collapsed.

It was not long before we saw a good deal of activity on the rocky plain below our point of vantage. Scouts reported that great masses of troops were leaving the city.

Yet the moon was not without an arm in space. The four small vessels left before Theophilus after the ramming of the *Sandoval* became the core of the lunarian navy; and a few former pirate or smuggling vessels had been commissioned as privateers. Small ships they all were, and usually obsolescent. But they were manned by skilled and dauntless men, and commanded by a hero—Paul Doane.

Doane had been able to get his little fleet into space before the arrival of terrestrial ships at Theophilus. He had roamed the lanes of space between earth and moon, committing daring raids on the transports bringing supplies. His ships had engaged and destroyed a dozen vessels, and had brought four prizes to the moon, laden with priceless cargoes of arms, chemicals, and munitions of war.

The space-ports at the three great cities, were, of course, occupied or blockaded by the Tellurian fleets; and Doane was obliged to make his bases of operations the lonely craters that once had been pirate strongholds. Landing in such a place, without the complicated machinery of the ports, is always hazardous, and requires the utmost skill on the part of the pilot to bring the vessel down gently enough to keep from wrecking it on the rocks. But Doane had in his fleet men of years of experience in piloting; in his rather romantic career, he had doubtless become familiar with such tricks himself.

The Tellurians had learned of such difficulties, to their cost, when they attempted to trap Warrington's army in the crater of Hipparchus by landing the fleet and disembarking soldiers in a circle about him. Several fliers were dashed to pieces on the rocks, because their control was not sufficiently delicate, and before Van Thoren had completed the maneuvers that were to bring Warrington's camp under the rays of his fleet, the general had left the crater by the rock "back door," a narrow ravine which led him into the rear of the enemy, where he had played havoc generally with supplies and reserves, and captured a score of great D-rays.

At this time, in October, 2326, Warrington occupied Theophilus. The space-port was blockaded; and though the location of Humbolt's army was not certainly known, it was expected that he would be landed near and attempt to invest the city.

New Boston, after Warrington's campaigns had led him away from it, had been re-occupied by the Tellurians, after a siege of a week. Colon had been twice assaulted by combined surface and space forces; but her citizens had put up a heroic defense, and she remained free of the terrestrials.

I was with Warrington, of course, in Theophilus. I had hoped to meet father and mother there, but I found that they had both gone back to Firecrest. Why, I did not know at the time. Certainly there seemed no use in working the mine, when the roads were so torn up and blockaded that metal could not be moved in safety.

The Assembly was still in session. There were troubles enough before it. It was becoming difficult to finance the war. Warrington was in sore need of men and supplies. The moon had both in plenty, but the terrestrial control of space had so far disorganized industry and communication that they could not be got to him.

It looked to many as if the war might drag on indefinitely, until the moon was ruined. In the difficulty, the Assembly resolved to call on outside assistance. A few years before, as the reader will recall, the Transportation Corporation had been at the throat of Metals. If it could only be induced to return to the attack, lunar independence might easily be won.

AFTER long debate, the Assembly voted to send a representative to earth to call upon Tranco for assistance in the war. As to who the delegate would be, there was little question. Benjamin Gardiner was known throughout the earth as well as the moon for his additions to scientific knowledge and scientific literature, and for the writings on philosophic subjects that had established him as possessing one of the most brilliant minds the human race has produced.

I have never known just why I was selected to be his private secretary on the trip. Certainly I wanted to go badly enough, and did everything I could to get the appointment; but there must have been a score of other applicants. Perhaps it was my old friendship with both Warrington and Gardiner that won me the place.

Gardiner was a man of above average height, massively built, with a firm, powerfully chisled face, and keen, penetrating blue eyes beneath shaggy brows. Even the stranger was impressed by the vast, restless power of the man; he carried an aura of dynamic and resistless energy, both of body and mind. At this time, he was well past middle age, but the casual eye saw nothing of senility in his erect, vigorous frame.

On October 3—it was yet in the forenoon of the lunar day—Gardiner and I left Theophilus on our momentous mission. Before we left there had been a dinner at Warrington's headquarters. In the huge bright room, among massive pieces of furniture scattered with reports and maps and plans, we had eaten a sober meal, talking quietly of what the war had brought and of what it might yet bring. Then, with a smile and a genial handshake, the General had wished us good fortune in our hazardous mission.

Clad in light, white garments and pith helmets, we had left one of the small valves in the city wall. Save for a brief-case of Gardiner's, that I carried, and our hand-weapons, we had no luggage. In the dazzling blinding glare of a sun that blistered and stung, we crept cautiously away from the city, through the rapidly growing brownish-green spiky vegetation on the great crater floor, keeping hidden in the thorny growth, or in ravines and canyons, out of sight of the five great sphere-ships that hung above the city, to keep the port blockaded.

Our way led us beyond a shining summit, and over the grim, gray, disordered desert-plain, wrinkled into hills and ridges, thickly pocked with crater-lets. Soon we were beyond the sight of the city's gleaming towers, though the three slender, black peaks still rose behind us. We forced a way through prickly thickets of the olive-green herbage, and clambered over loose mossy rocks, weirdly splotched with green and purple and scarlet lichens. An inconspicuous sign here and there sufficed to keep us on the regular path of Warrington's intelligence service.

Steadily the sheer, threatening barrier of the crater wall rose before us, ranging up thousands of feet in a rugged wall of naked, black rock. Several times we stopped to rest at one of the little hidden stations, where food and bottles of water were cached. Even after it seemed that the grim dark wall was almost over us, we struggled on for many weary hours. But at last we reached it, crept through the narrow defile that had been cleared with the D-rays. And we walked out of chill shadow into the hot blaze of the sun.

We stopped in a little bare open space, where the very rocks seemed quivering in the sun's unbroken glare. Out of his pocket Gardiner drew a little flag of yellow and scarlet, which he waved above his head.

In a moment a white-clad man appeared from a mass of thorny, bayonet scrub on the hillside behind us, below the frowning barrier of the black crater-wall, that

ragged line of summits in a broken line against the dark blue of the sky. The fellow stood half hidden in the dull-green scrub for a moment, cautiously peering through tinted glasses, with D-ray in his hand. Then suddenly his manner changed, and he came leaping down:

"Gardiner! The great Gardiner! We use your atomic heater, to warm our little post here! But I never thought—— We are at your command."

The old scientist smiled genially. "We are going to station K, to meet Paul Doane," he said. "I need moon-calves to carry myself and my companion, and a guide."

"Sure," the fellow grinned behind his green goggles. "Just a minute. And I'll leave the post to my partner and guide you myself."

He left us, and ran back through the scrub to the boulder from which he had appeared. He vanished behind it, and for a few moments we stood alone there, on the edge of the desert.

"Wild and lonely, isn't it?" Gardiner remarked. "I lived on earth for years, in my youth. And I can never get used to this again."

"Harsh and cruel enough," I assented. "And yet there is something alluring about it, mystery, romance, the unknown."

"Yes, I have felt it—have even wished I had time to go prospecting myself. The moon is rather inhospitable to man, and yet the very difficulty of this life has made the moon people what they are."

Suddenly a great mass of coralline cactus-like growth on the hillside above us was bent aside, to reveal the mouth of a cleverly hidden tunnel or cavern. From the black opening three bulky moon-calves emerged, with shining metal saddles strapped on their broad backs.

On the foremost was mounted the man to whom we had spoken; the two others were for us. The guide flung out his arms in a curious gesture. It was caught by the great flat green eyes of the creatures, for simultaneously, their long spidery legs bent, they crouched, and then their colossal, scaly red bodies were catapulted into the air. Down they came toward us, vast scarlet elephantine creatures, hopping like grasshoppers.

Obedient to the gestures of the white-robed rider, who seemed a mere midge upon his gigantic mount, the three Selenites came down toward us, at the end of the last leap landing so near that I had a momentary fear of being crushed beneath them. One of them fell right before me, landing agily on slender, spidery limbs. Its broad green eyes with the tiny black pupils stared at me inscrutably. Those eyes were very strange, very alien—with no trace of feeling in them.

The huge red thing bent its spindling legs, bringing its glistening, scale-armored, scarlet belly to the rocks. A leap carried me to the metal saddle. Franklin permitted the third monster to lift him to his seat with its trunk-like appendage. In a moment the guide had signalled with his hand, and we were off.

"Hoo-Ayae! Hoo-Ayae! M'Ob!" his deep voice rang out in the ringing command. The vast bodies beneath us were catapulted smoothly and swiftly forward. We swept through the air on a high, swift flight, for a hundred yards or more. Then down to the rocks, a sudden rocking of the saddles, and another great bound.

Again the guide called out his chanting cry, "Hoo-Ayae," and repeated, in an affectionate voice, the name of his mount, "M'Ob." And suddenly I recognized both beast and man. The fellow was Jenkins, the curious man of the desert, who had discovered the Firecrest mine, and sold it to my father. As a boy, I had rather liked the short, sun-burned fellow, in spite of his roughness. But it was many years since I had seen him.

AS we swept through the air, the three great beasts leaping abreast, I called out to Jenkins and told him who I was. He seemed oddly pleased, and professed to think that he would soon have recognized me. He made eager inquiries about father and the rest of the family, and seemed delighted at the news that Valence was happily married to Tom Dowling—it seemed that Jenkins had been with the young fellow on a prospecting trip a few years before; he told me, "Tom's a real man. He's got guts!"

Presently the old scout began a long-winded account of how he had come upon the Firecrest prospect, but my experience was so novel and exciting that I soon lost interest in his words.

There are few more thrilling ways to travel than upon the back of a Selenite. One sits in the little box-like metal saddle, with the bright-colored sunshade above him. He gives the signal with his hand. The slender legs of his vast mount bend, the armored red body sinks almost alarmingly. Then the spring—a long, deliberate surging sweep that sends one on a lofty flight of a hundred yards or more. One mounts swiftly, plunges delightfully forward through the cool air, settles easily to the surface again, ready for the next rocking leap. It is a splendid means of travel, affording marvelous sensation and superb views of the moon-scape. And it is surprisingly rapid.

Like great, barrel-bodied insects hopping, our Selenites carried us swiftly into the wild regions west of Theophilus.

Vast slender mountains, baked and blazing in the sunlight. Cracked, stony deserts, wild ravines, ebon-shadowed craters. A pitiless contrast of blinding illumination and mysterious shadow. Here and there a splash of violent color—scarlet lichen, purple scrub, rich-blue mosses, patches of emerald green. And above all, the sky was a bluish black, set with many stars even by day.

Leap . . . Leap . . . Leap.

Hour after hour. The weird panorama of harsh and startling contrast in form and color, in blazing light and profoundest blackness, dropped, slid beneath us, rose to meet us again.

I gazed about, ever enchanted. I was lost in awe at a vast majestic peak, crowned in solar splendor. I exclaimed at sight of some strange shrub, bright with a foliage of vivid green or startling magenta. I was startled at some quick, slender, leaping thing that sprang up like a flash of living color before us, to vanish in a mass of bayonet scrub.

Gardiner had his notebook out, and was recording observations or speculations of some kind, I suppose. Jenkins was muttering low words that I did not understand, to M'Ob, the love of his life.

Leap . . . Leap . . . Leap.

I grew sleepy in the unbroken heat of the sun, and dozed as we swept through the air, jarred into wakefulness at each rocking landing. The air was hot and still near the rocks, and laden with sharp, strange odors. But high on the long arc of our flights, it was cool and pure.

At last, my mount failed to rise again, and I sat up sleepily to see what the matter might be. My companions had come down beside me. Before us, a quarter of a mile away, rose a ragged mountain wall. Below it, and extending to our feet, was a dense forest, perhaps the thickest I had ever seen, of the dull-green spiky plants, dotted with purple and scarlet trees, and festooned with coralline creeping vines.

I turned my head. The towering walls rose unbroken all about us. We had entered a crater through some concealed passage. The high-rimmed cup was not a

mile across. The whole floor was densely covered with the thorny lunar forest.

And in a little rocky glade beside us was a space flier.

The great sphere, nearly a hundred feet in diameter, lay on a bed of rocks, where it must have taken unusual skill to land her without disaster. The upper part of her gleaming silver surface was covered with brown splotched canvas, to conceal her from the eyes of the terrestrial fleet. Below the edge of the cloth was the name, stenciled in high gold letters, *Eagle*.

A few yards from it was a circular opening in the rocks, closed with a low metal door—the mouth of a shaft. And a little distance away was a tiny cleared patch, covered with rows of red and green plants, the garden, I suppose, of the ship's crew.

No one was in sight when I sat up. But suddenly a sentry sprang up out of the tangle of yellow scrub a few yards away, with a D-ray projector in his hand. He swept a keen eye over us, shouted a familiar greeting to Jenkins, and turning, sang out something in the direction of the ship.

In a moment, a man sprang out of the open air-lock of the vessel, a dozen feet above the ground. He landed with cat-like grace, and came bounding toward us. A striking figure, truly. Face thin, with blue eyes eagle-keen. Stray wisps of bright red hair sticking from beneath a white topi*. Body tall and spare, clothed in clean white ducks, and girdled with a sash of brilliant red—a memento, that, of what the hero's earlier adventures had been.

"Paul Doane!" Gardiner cried.

"Gardiner! My old school-master! Welcome to the *Eagle!*"

A smile of real pleasure lit the great space-captain's lean brown face. Instinctively I paid my homage to this great hero of the void.

In a few minutes we were in the bridge-room at the top of the ship—a wide space, covered with a low metal dome in which were a hundred little windows. In the center was a circular table, built about the axis of the rotation wheel. It was covered with tubes and levers, signal lights and buttons, and with periscope screens that gave the view in all directions. There were the telegraph dials for communication with the engine room, and the telephones to the D-ray decks, the winking lights of the meteor detection devices, and the keys of the complex calculating machines used in plotting courses. Quite a complicated set of instruments, all told.

Doane's second officer, a lean young chap named Bris, stood by the table. He saluted respectfully as we entered. Doane presented us warmly, and rang a little gong. In a moment a white-clad steward entered, with glasses, siphon, and a great flagon of Doane's favorite beverage.

"Doane," Gardiner said briefly, as he set down his glass, "we must go to New York."

"To New York?"

"Exactly."

"You know there are certain risks?"

"The danger is inevitable."

"It is my trade, of course; but you are a statesman, a valuable citizen—"

"The cause of the revolution demands that we treat with the Directors of Tranco."

"I will get you there if it can be done."

"Good. When can we start?"

"In an hour."

The interview was over.

*A pith hat or helmet, originating in India, worn as a protection against the sun.

CHAPTER XII

A Trip to Earth

AN hour later, as Doane had promised, the crew of two hundred men was aboard the *Eagle*, the canvas cover had been removed, and we were rising swiftly out of the fantastic yellow forest.

Swiftly the blue-black sky grew blacker, and tracks of nebulous star-dust crept out among the brightening stars. The sun, driving intense shafts of fire slanting across the control room, became a great and incredible wonder of livid, winged, white flame. I donned my tinted glasses and viewed it—a great sphere of white light, marked with the redder sun-spots, with the serpentine prominences of the corona writhing about it.

Doane had crowded on all our power, in the hope of getting away without being observed by the patrol. Great trails of fire were flaring moonward behind us, and the acceleration drew me so forcefully against the deck, that used as I was only to the feeble gravity of the moon, I was very uncomfortable.

Gardiner and I were alone on the bridge with Doane and his first officer—the men were below, at the machines or in their quarters. Doane and Gardiner stood over the great round instrument board, Bris, our mate, was making entries in a log-book, and I occupied myself in nervously pacing the deck, stopping to gaze out first at one window, then at another.

Doane suddenly muttered a low exclamation, and began to manipulate the telegraph dials before him. He called Bris, gave him a quick command, and the officer fell to pecking swiftly at the keys of the machines which plotted the course. I felt the ship swerve, and our speed seemed increasing more rapidly than ever.

Gardiner beckoned to me.

"Look," he said.

I peered into a ground-glass disk that was evidently the objective of one of the telescopic periscopes. In it, against a field of utter black, were two bright points of fire, far apart and apparently motionless.

"Those are two war fliers," Gardiner told me. "We see the sunlight reflected from their hulls. They were picked up by the automatic radio-beam detector that enables us to avoid meteorites."

"The indicator shows that they are approaching us at almost a thousand miles per hour," Doane added casually. He seemed undisturbed, bending over the bewildering array of instruments as calmly as though no peril were in the offing.

"How far off?" I questioned.

"Three hundred fifty-one miles," Doane said. "And if they are Van Thoren's cruisers, as they must be, their maximum acceleration will be somewhat above our own. We have several hours, though."

Presently I went away from the table, where Doane and Bris bent so intently over the instruments, and fell to walking up and down the floor again. The bridge-room was a strange place, dark despite the shaded lamps above the great round instrument board. The narrow blazing shafts of sunlight glanced blindingly on the floor, hardly seeming to light the rest of the room.

The nervous tension and the inactivity preyed on my mind.

Doane had showed me the little dials that indicated the distance of the pursuing ships, and sometimes I went to look at them. Always the distance was a little less. In two hours we lost only a hundred miles, though the moon had shrunk from a weird, rugged plain to a bright mottled sphere that seemed to hang very near in the night of space.

Presently, as I was pacing up and down, Bris, the mate, touched my arm.

"I'm going down to see the men. Care to go along?"

I did care. Anything to relieve the strain of monotonous inactivity was welcome. We climbed down through a round manhole to the D-ray deck just below the bridge. A great circular space, rimmed by the wall of the ship. All about the edge, in a ring, were the huge ray projectors, twenty-four in number. They seemed in readiness, polished and gleaming, with the crews of three men each, near them.

It was curious to note the occupations of the men in the present proximity of peril. A few were busily polishing their weapons, as if those were their greatest loves. A few were standing about, whistling, chatting or smoking, as if they had no care in the world. Two or three were reading in secluded corners under their pieces, and one young fellow seemed to be writing a letter. But the great attraction seemed to be a game of chance; fully half the white-uniformed crew were gathered in a ring in the center of the deck about the ivory cubes.

Bris called them to attention, delivered a few words of cheer. He told them that Franklin was aboard, that his fate, as well as the probable fate of the moon, depended on their bravery and obedience. They responded with a cheer and then fell to singing a rough ballad of

One mounts swiftly, plunges delightfully forward through cool air, settles easily to the surface again, ready for the next rocking leap.

one "Boss Varney, free rover of space." Their rich, mellow voices, swelling up in that old pirate song, carried an infectious spirit of youth and courageous enthusiasm.

WE left them, as the minor officers were getting them to their pieces, three men to each great, gleaming tube. On down we went into the bowels of the ship. We passed the power plant, a vast, gloomy space in the center of the sphere, crowded with huge and complicated masses of throbbing, whirring machinery. The revolving wheel that carries the quarters of the crew was like a great ring about us. Here and there were grimy engineers, standing beside the vast humming generators or intently watching dials, and greasy oilers swung like black spiders here and there in the web of black metal. Even they seemed to take the coming action with a good enough spirit, for many of them were singing or humming at their work.

Through this, we clambered down the long ladder to the lower D-ray deck, where there were twenty-four more great tubes, and seventy-five waiting men. Below this deck, at the pole of the sphere opposite the control room above, were the projectors of the atomic blast that hurled us through space. Bris repeated his speech, the men moved to their stations, and we returned to the bridge.

The pursuing fliers had gained seventy miles in our absence.

Another hour went by, with our ship plunging earthward at the limit of its speed. Now the other war-fliers were but forty miles away. One hour more, I thought, and their vastly superior armament will have swept us out of existence.

But I did not know Paul Doane.

I was standing by the little round disk of the periscope, watching the two points of fire that were the ships. They were very bright now. Suddenly Doane leaned forward to a bank of keys, depressed a group of them in a certain complex pattern.

I felt the *Eagle* lurch a little, heard a sound like the firing of an old-fashioned cannon. A few minutes later, the projectiles he had fired exploded behind us. White luminous clouds spread from the quick bursts of flame, grew until they were vast masses of mist, hiding the other fliers and filling the sky with an opalescent curtain.

(These projectiles were the Ziker space-screen bombs, which form vast clouds of electrically charged particles in space, lit in part by the sun, in part by the radioactivity of the constituent matter. They are an important item in the strategy of space-fighting.)

When the forming clouds had grown large enough to protect us from the searching telescopes of the other ships, Doane cut off our acceleration; and we floated a few miles back of the cloud, waiting.

With the blast projectors shut off, our sensations were the queerest. Gravity seemed suddenly gone. We floated in the air, pulling ourselves about by hand-rails, or walking only with the aid of magnetic shoes.

We waited for the war-fliers.

Suddenly, at the same time, they burst through the luminous mist screen, plunging earthward so fast that they passed beyond us, one on each side. The *Eagle* was ready, with a pole turned toward the path of each. A broadside of rays from our upper D-ray deck caught one of them, and the other found itself the target for the tubes of the lower deck.

The Tellurians must have been taken somewhat by surprise, supposing Doane to be seeking flight beyond his mist-screen, for their fire was delayed and ineffectual. It was evident that our rays had done serious damage, for the silvered reflector screen was cut in great streaks from the ships, and the naked plates beneath were heated to incandescence; and the propulsion machinery of both seemed crippled.

I have no doubt that Paul Doane would have won a complete victory if he had stayed to fight, but he was intent not on victory but on escape. Before the crippled vessels could turn, he had driven our ship into the vast luminous cloud. And a moment later we were out of it, on the other side, and sweeping toward earth again.

Either the other ships were too badly crippled to follow, or they searched for us in the cloud until we were beyond the range of their detectors. They did not follow.

A day went by, and our beams showed no sign of pursuit.

In the long days that followed, as we were hurtled through the fantastic, lonely desolation of infinite space, I spent much time in clambering about the ladders and cat-walks of the ship, from bridge-room to blast projector. I learned something of its mechanism, and made friends of several members of the crew—who were mostly cheerful, happy fellows, with the oddest childlike faith in little talismans they carried to ward off the thousand terrors of space.

One man had a moon-calf's scarlet scale, polished to a ruby disk. He wore it on a platinum chain, and swore that no harm could come to him until it was lost. Another pinned his faith on a fragment of a meteorite that had somehow found its way into his bunk when the stone had struck the ship upon which he was then serving. And there was a tall young Canadian who had a red wool sweater of marvelous properties—he had had a miraculous escape, after a collision in space, while wearing it. He had unravelled so much of it to give away as charms to his comrades that little more than the collar was left. And all swore devoutly that not a man had been injured in the thousand perils of their trade, who had had a thread of that sweater about his person.

Gardiner was utilizing his spare time to write a monograph on his latest work in electromagnetic vibration, and I helped with that, taking dictation and revising his notes. He was one of the few men of great intellect, whose genial good-nature and unfailing cheerfulness makes it a pleasure to be near.

And, as we sped through space, I thought more of the girl I had met at Theophilus, who had called herself Mary Jons. I wondered who she really was, where she had gone. I wondered if she could be actually as beautiful as I recalled her, wondered if I would find that I loved her as much as I felt that I did, if I should ever see her again.

There seemed small chance indeed that I would meet her on earth. But I had always imagined that she had gone back there. And I had a lover's optimism.

IN spite of our delay during the battle with the war-fliers, our passage was unusually short. It was just nineteen days after Gardiner and I had left Theophilus that we entered the earth's atmosphere. On the night of October 22, 2325, we entered the air, over the North Atlantic Ocean.

Landing had seemed to me quite a problem, in secrecy, at night, and on a strange planet. But Paul Doane did not seem at a loss. He took us westward, at an altitude of some fifty miles, until the lights of New York City were visible like a great flake of silver fire in the darkness below.

Then he slanted down, reaching the ocean a few miles off Long Island. Landing on water, of course, is a far simpler matter than coming down on the cruel rocks of

the moon, though the vastly greater gravitational pull of the earth complicates the matter somewhat.

And the gravity of the earth, six times that of the moon, was a very serious inconvenience to our own movements. Even with the *Eagle* resting still on the water, I felt the same unnatural affinity for the deck as when we had been accelerating with all our power, in space. Seats had been provided in the bridge-room, and feeling heavy and uncomfortable, we all made use of them.

Our voices sounded increasingly loud, as air was slowly admitted to the flier to raise the barometric pressure to that of the new planet. Not only does the heavier air of earth carry sound better than the atmosphere of the moon; but our auditory and vocal organs were adapted to the rarer air. After the landing, I found my hearing almost preternaturally acute; and I had considerable difficulty to keep my voice low enough not to sound conspicuous among the terrestrials.

The great shell drifted landward under the merest impulse of the blast, until the dark line of the land was visible through the murky air of earth, a half mile away. Then the men produced and launched a small, sheet-metal rowboat, which, I suppose, had been built during the voyage for just this emergency.

Gardiner and I stepped into it, after the oarsman was aboard, shaking hands with Doane. In five minutes we were landed on the sand, and the man took the boat back to the dark mass of the space flier. Watching, we saw the merest wisp of iridescent mist swirl toward us from where it had been, and it was lost in the night.

"Where is he going?" I asked Gardiner, my voice unexpectedly loud in the dense air.

"He intends to hide the ship in the north of Greenland. He will be back here three weeks from tonight, will send the boat to take us up."

My sensations were the queerest imaginable. My memories of the earth were but scattered and vague, and when I had been taken to the moon, I was too young to appreciate the strangeness of a trip between worlds.

The gravity of the earth gave my body a leaden weight. Accustomed to travel by great strides, or by bounds of many yards, I found it difficult to pick up my feet. The air felt oppressive, close, moist. It was a squeezing pressure on my chest. And my sense of equilibrium was affected, for I reeled and stumbled, and had to sit down on the sand. Gardiner seemed to be suffering as much as myself.

"It's just the gravity," he said. "It will pass. We will be acclimated by daytime."

For long hours we sat there.

All my sensations were strange, but I think the strangest thing was to be out of doors at night. I could not remember having been out at night before, for on the moon the touch of night is death. As we sat there, I looked at the stars. They were not motionless and bright like those of the moon; the thick, murky air gives them an odd wavering motion, the sky is never really black, and most of the stars are always screened in the air. Odors, too, were strange. There was a curious smell of growing things, of unfamiliar flowers, and the salty tang of the sea.

Then came sunrise. Not a sudden burst of blinding fire, but a symphony of changing, multitudinous shafting shades of liquid light, wonders of pale dawn-cloud, tinted with softest gold, miracles of crimson and purple, splendors of deepest azure of gorgeous gold. A ruddy sun was born from a sea of molten glory.

And we rose from our seats on the sand, two strangers on an unknown sphere—with a vast and perilous mission before us.

CHAPTER XIII

The New York Negotiations

THE beach on which we had landed had seemed very lonely by night, but it was not so by day. A half mile above the water rose the colossal pile of a building, enclosed in a glittering armor of glass, somewhat like my familiar cities on the moon. But this edifice was slender, and two hundred stories tall, with a flat landing stage upon its summit.

All about it the grounds were beautifully landscaped; hedges, lawns, and clumps of flowering trees, scattered with fountains, golf links, and promenades, extended down to the beach where we stood.

A mile farther on was another vast building, and to the right of that were two more slender, towering structures. And there were more beyond, the farther ones dwarfed by distance, and blue-like, far-off hills. All Long Island was scattered with them, and the land beyond the Sound.

The carefully tended pleasure-gardens were incredibly beautiful to one from the drear wastes of the moon, bright with the luxuriant emerald vegetation of eternal spring. With climatic control, which boundless atomic power had made simple on earth, though it is impossible under the vastly different conditions of the moon, winter has not come to New York for a hundred years, and orange trees bloom in its parks.

As we strolled up the silvery beach, under an oddly mild and genial sun, lost in the wonders of this unfamiliar world beneath a blue sky so bright that the stars could not be seen by day, the place awoke. The gleaming wings of airplanes flashed across from landing stage to landing stage; and the gardens were soon dotted with the dull-gray uniforms of the caretakers, and flecked with the brighter garments of a few young idlers bent on morning exercise.

Our sun-helmets and tattered white garments must have made us rather conspicuous, for I remember one blear-eyed old fellow, who was running a whirring automatic mowing machine, who stopped and stared at us a full minute as we walked past him. A bit farther on, strolling over a soft rich lawn bordered with a blaze of orchid bloom, we met a brightly dressed young man and a gay girl, with tennis rackets in their hands.

"Hello, there my men. What's your idea?"

Taken rather aback at this uncalled-for question, I looked at Gardiner.

"Tranco. N3D. 136 kn 9." The old scientist answered glibly.

"Yes?" There was a note of suspicion in the youngster's voice. "Then what's the matter? How'd you come to be in a rig like that?"

"We've been in the Sahara. Prospecting. Aero dropped us on the beach at daylight." He fished in his pocket, drew out a little disk of stamped aluminum and extended it to the fellow. "See?"

"Yes. Iden, all right. 'Tranco. N3D. 136 kn 9.'" He handed it back. "Looks all right. But you had better watch out for the information gang."

He turned to the girl, threw his arm about her familiarly. They strolled on over the bright garden, turning, once or twice, to stare back at us as if suspicious of our garb.

Gardiner turned to me. "Idle pleasure-seekers!" he muttered, a little contemptuous. "What would they do, set down to farm a crater on the moon?"

He handed me a little disk of that metal. "Identification tag. What he called an iden. Everybody has to have one. It tells what corporation you belong to, and how much pay you get. Also has your identification

number on it. A man is ranked socially by the amount of pay shown on his tag.

"And as the young man hinted, we must be careful. Metals has spies everywhere, and we lunarians are fair game for them, to be treated as traitors if caught. We will be safer after we get under the protection of Tranco. But we must get to town at once, and get on different clothes."

We walked on across the bright, unfamiliar gardens to the vast pile of glass and steel. We passed beyond the emerald lawns and masses of gay shrubbery, and entered the great building through revolving doors. An elevator shot us down to the business levels, a few hundred feet below the surface, where we found a dry-goods shop. Gardiner was well supplied with Tranco credit vouchers; and soon we were attired in the fashion of the city. I chose a crimson tunic, with blue robe and sash, while Gardiner contented himself with a dark green suit, with black mantle.

Then, at a higher level, we found the dining-rooms and had a breakfast of synthetic food mixture, served with orange juice. Having eaten, we purchased a news strip, upon which the happenings of the last few hours were recorded in the modern printing shorthand, and took the elevator to the roof.

On the landing stage there we engaged passage to the building on Manhattan Island which houses the executive offices of Tranco. Gardiner, reading the paper as the swift atomotored flier cut silently through the air, assured me that nothing was said to indicate that anyone had seen the arrival of the *Eagle* in the earth's atmosphere.

In a few minutes we had landed on the great, three-decked stages of the Tranco Building, one of the largest in the world. Two hundred and seventy stories high, it covers sixty acres, and is the capitol of one of the largest corporations in existence.

We dropped by elevator to the floor given over to the Board of Directors. This proved a veritable palace, of beautiful architecture, finished with a splendor that was amazing to me. Here we interviewed a few secretaries in the little glass cells before the offices of the dignitaries whom they guarded. Gardiner did not wish to disclose our identity until he had learned something of the attitude of the corporation toward the war on the moon; but it seemed impossible to see anyone in authority so long as we were unknown.

BUT at last, in one of the long, bright-lit, splendid halls, which had moving ways like the streets of the moon cities, we met a little wrinkled man, who sprang to greet Gardiner with an eager exclamation.

He was, it seemed, one Robert Bakr, himself a Director of Tranco. A man of scientific interests and aspirations, he had long known of Gardiner and his brilliant work, had even met him at scientific gatherings in New York, years before.

He seemed delighted to meet the old scientist. He hurried us into his sumptuously furnished office, and inquired about our business on the earth. Gardiner lost no time in telling him the object of our visit. He could give us no assurance that Tranco would be willing to break the peace with Metals, but he assured us of the cordial friendship of the corporation.

After a time, he conducted us up to the offices of the President, in a suite of such splendor as would make a lunarian gasp with wonder. We were most warmly received by that dignitary, a tall man with iron-gray hair, named Frank Lewis. He inquired about conditions on the moon, commented on Gardiner's scientific achievements, and invited us to come again.

He gave orders that we were to be treated as honored guests of Tranco. From his office Bakr took us to another where we were given passports that would insure our personal safety. Then he carried us off to his palatial suite in a building above the Palisades, and made us stop with him. We stayed at his splendid establishment as long as we were in New York. He and Gardiner had long discussions over my friend's latest work in space-radio. The monograph was read, and I think Gardiner and Bakr worked out one or two new experiments together.

We saw Lewis again. He was certainly friendly enough; and I knew that his best wishes were with the insurgents on the moon, for the revolt threatened to break the power of his greatest enemy. But his memory of the war of 2307 was so strong that he hardly dared to take any open action.

One day a meeting of the Directors was called in the spacious and magnificent auditorium in the Tranco building. Gardiner spoke before it, making a powerful appeal for the cause of the moon, stressing not only the cause of right and human liberty, but the advantage to Tranco in having a free corporation on the moon, with which it could trade on an equality with Metals.

The Directors were doubtful, some of them frankly afraid. The meeting presently broke up without having come to any definite conclusion; but the case, we understood, was almost hopeless.

But Gardiner was not one to give up easily. He kept at work on the project. He saw Lewis often, and was most cordially received. And sometimes I warmed the cushions in an outer office for long hours while he was closeted with some other official. Now that his identity was known, his popularity became immense. He was a lion at the great social affairs, a guest eagerly sought for by the most exclusive circles. His simple manners and quiet taste in clothing even caused a fad of imitation in the fickle fashions of the time. But he did not forget his purpose; he used wit and intellectual attainment to work steadily toward his end.

That men were willing to listen to his brilliant talk or to invite him to their select social functions, did not mean that they were willing to go to war for the cause of the moon. After we had been on the earth ten days, the Directors held another meeting, influenced, perhaps, by diplomatic complications with Metals that had risen from our efforts, and solemnly resolved to let no cause "dissolve the ties of peace and friendship" that bound them to Metals.

But even then, Franklin did not despair. Bakr was still warmly friendly, he was still an admired and welcome guest in social circles, and at the offices of Lewis. He had met a wealthy young man, Lafollette, the head of the Chicago offices of Tranco, who held a deep devotion to lunar liberty. It seemed that Tranco might help us secretly, if she dared not do so openly.

One day, after he had been to some sort of secret conclave in the offices of Lewis, Franklin returned to Bakr's suite, where I was waiting, with his smile of encouragement on his lean face. In reply to my eager inquiry, he said:

"Nothing definite. But a chance for something that will be worth a great deal to the moon.

"You remember the war of twenty years ago?"

"I should. Father was almost killed in it."

"Then you know that Tranco had been building space-fliers. One Doctor Vardon had sold them an invention of his, a process for using gold to generate the atomic blast for propelling space ships. The experimental ships were discovered by Metals, wiped out. Vardon and all the men working with him were killed. The secret of the discovery was thought to have died with them.

"But Vardon left a widow and an orphan child—a girl. A few days after his death, they vanished. The information service of Metals hunted them for years. and Tranco officials, suspecting something, joined the search.

"Until a few years ago, it was not known why Metals wished to locate the mother and the girl. But last year Lewis received a communication from one Leroda Vardon, who claims to be the daughter of the dead scientist. She stated that she had in her possession the secret of the gold atomic blast, and offered to sell it. Lewis had her come to his offices for an interview, and had an investigation made of her claims. He is satisfied that they are genuine.

"It seems that the matter was brought up before the Board of Directors in secret session. Remembering their previous experience with the invention, they were afraid to make any attempt to use it. They endeavored to get possession of it; but the girl wanted a million units—the secret is worth a thousand times that, of course—and the penurious Assembly, not daring to use the secret after they had bought it, would offer no more than a half million. Nothing came of it except that the young woman was granted a pension to keep her from trying to dispose of the secret elsewhere.

"And, John, Leroda Vardon is now in New York. Lewis has arranged for Bakr and me to call on her tomorrow. It is possible that we can make some arrangement to get the discovery, if she really has the plans. And if we get it, it might be possible to build a fleet on the moon, in which the blast-projectors can be installed.

"And once we have a fleet, so we can communicate with earth, I think we can get help."

THE next afternoon we flew out to one of the great buildings on Long Island—the very one at which Gardiner and I had landed. With Bakr as our guide, we descended elevator shafts, and glided down moving ways, and at last stopped before a door at the end of a hall, where there was a huge window looking out upon the green expanse of the ocean of earth.

Bakr pressed a button, and presently the great door swung open. We stepped into the vestibule, where Bakr left us seated for a moment, while he walked on into the next room. In a few minutes he came back and called Gardiner, and they were both gone for a time. I was not included in his gesture; and I remained seated, though I had a rather strong curiosity to see Leroda Vardon.

At last the door swung open again, and Bakr came into the little room, with Gardiner at his heels. Gardiner was speaking back over his shoulder in a hopeless tone:

"No, the moon could not possibly pay a million units."

Then I heard a woman's voice, trembling with emotion and determination:

"But it cost me my father and my mother. Because of it I have been a fugitive, a homeless wanderer, hounded by the spies. And I must be paid—"

That voice was familiar.

The sound of it brought me a queer, eager thrill. For a moment I stood there, heart thumping madly. Then I brushed Gardiner and Bakr aside, and rushed through the door.

Before me stood the girl I had known on the moon as Mary Jons—the mystery girl, who had vanished so suddenly. Beautiful as ever she was, tall and slender. Her oval face was flushed with feeling now, and there was a gleam of moisture in her eyes. There was something about her that suggested the fresh, clean wind of the seas of earth.

I seized her white forearms, looked into her dark, shining eyes.

First she jerked back, in surprise. Then a sudden light of incredulous gladness flashed over her face, and she whispered in an odd tone:

"You!"

Her arms trembled in my hands. She closed her eyes, swayed a little toward me. Then suddenly she stepped back, pulled free of my grasp. I stood there, speechless, overcome with a queer, tingling delight.

"Mr. Adams," the girl began, trying to be formal, "I am glad—"

Then she seemed to choke, and stood with tears brimming in her glorious dark eyes. I stepped to her awkwardly, held out my hands. She thrust out her own slim white hands, uncertainly, as though groping through a cloud of tears.

I grasped them, drew her to me. She trembled, yielded. Another moment, and she was in my arms.

A few minutes later we were sitting together on a divan at the end of the bright little drawing-room. I do not know how long Gardiner and Bakr waited outside, before they ventured to come in and interrupt us.

Then Leroda Vardon proved herself a charming hostess. She went to a panel on the wall, pressed the buttons that brought a great tray of delicious refreshments up the service tube. I confess, however, that I have little idea of what those delicacies were; I do not remember whether I did full justice to them or not.

Presently we left, but not until she had promised to go with me to one of the pleasure-palaces.

We had, as I remember it, a gorgeous time that evening. The details, perhaps, are a little vague in my mind. I have no definite memory of just what we did. There was a theater, with a silly play, no doubt, and a supper afterward, and probably we went the round of the fashionable amusement places. But the important thing was Leroda. I was intoxicated with her charm, her beauty, her vivacious wit. How I treasure the memory of those last moments in the flier, as it brought us back to her building!

I bade her good-night at the lift, but not until she had promised to play tennis with me next morning in the bright, fragrant beach-gardens.

I planned to make the most of the eight days until Paul Doane was to come back for us.

That night, when I had flown back to Bakr's apartments, where Gardiner and I were staying, I found waiting for me a sealed note, addressed in Gardiner's flowing hand. I opened it to find a brief message in his shorthand, fine and clear as if printed.

"Dear John," it read, "I am flying to Chicago tonight, with a friend. Will return in time. Enjoy yourself. B. G."

I wondered who the friend might be, but I did not let worry interfere with following his last injunction.

CHAPTER XIV

The Secret of the Cylinder

THE days that followed slipped by in a sort of golden mist. Leroda and I were together most of the time. Walking together, we explored all the green fairyland about the great building, discovered a dozen little nooks in the fragrant, flowering shrubbery where we felt delightfully alone. We lunched and dined together, and danced afterward; from a private box we witnessed the changing wonders of the earth, on the "stereo" picture screen—when our eyes were not upon each other.

And one day we hired a little flying boat—a tiny

machine of bright aluminum, with wings painted red; it was driven by atomotor. We had a cruise of delightful adventure down the Atlantic seaboard; and spent the night on a great floating pleasure island, in the warm waters of the Gulf Stream, off the Florida keys.

Perhaps the recreations there were artificial and mechanical, but we had a most delightful time. The magic of our association turned the world into a joyous paradise.

After a day there, we returned to New York. The gleaming little machine, with air-foils folded and atomotors driving whining propellers, was cutting through the air at nearly a thousand miles per hour. Leroda sat beside me in the little enclosed cockpit, her slight, warm body in thrilling contact with mine, managing the controls of the little machine with unconscious skill.

Suddenly she cut off the motor. We dropped in a long arc toward the blue, sun-bright Atlantic. Swiftly, the air-speed indicator and the altimeter dropped toward zero. She watched the instruments alertly, presently switched on the landing helicopters. The little vessel struck the warm, glassy surface lightly as a bird, floated buoyantly, rising and falling a little on the swell.

We were utterly alone. The white flat desert of water stretched about us, glittering in the evening sun, broken only by a thin green line of land in the west, with a gray smudge of cloud above it, that was flame-tipped by the sun.

I turned expectantly to Leroda, to find her blue eyes serious and thoughtful.

"John," she began slowly, "I have something to tell you."

"Let me kiss you first," I demanded cheerfully.

She submitted gracefully, but without the loss of her sober manner.

"I have a secret, John. It cost my father's life, and then my mother's. It has made me a hunted woman. It is father's invention—a new source of atomic power. It is worth billions to the earth, for it would make over all industry. I have tried to sell it for a mere million units. It is worth a million times that; but after the terrible war when father was killed, men have been afraid to buy it. They are afraid of Metals Corporation."

"Then you have Dr. Varden's formulas and plans?"

"Exactly. The invention that Gardiner was trying to buy—when you came to me. Of course I can't carry such a thing with me. The spies of Metals have been on my trail for years—they would murder me cheerfully for the secret, if that would get it.

"Father gave his papers to mother when he went away to build the ships for Tranco. I was a baby, then. Father knew that he was doing a dangerous thing; he had warned my mother. She slipped away, when—when—it happened. She hid the records.

"Spies hunted us. Metals knew that if they could get the secret it would make them the most powerful corporation in the world. We were poor. We had to go from city to city, with the spies always after us. We had to take false names, to live in miserable tenements, to work for our food. When I was old enough to understand, mother told me all about it, told me where the plans were hidden. And she said it would be safer if we were not together. She put me in a school, and went away. She sent me money regularly—she must have slaved for it.

"I was twelve years old when they caught her. She managed to send me a farewell message, and her savings. She told me to go to a school on the moon—it would be safer there. I don't know what they did to her; she died in prison.

"And on the moon, at Theophilus—" she smiled through the tears brimming in her earnest eyes.

"I found you," I supplied.

"And because you followed me home, I imagined that you were a spy. I could not trust my heart. That is why I left. And then, a few days ago, you came with Gardiner, and I knew—"

Blue eyes were laughing now, through her tears. It seemed the psychological moment, and I took her in my arms. It was somewhat later when she spoke again:

"But the secret. I must tell you where to find father's records."

"But the moon cannot pay—"

"I'm giving them—to you, John."

"Oh! But you mustn't—"

"It has been a curse to my family, anyhow; and it probably would never do me any good. My mother sealed the papers up in an aluminum container, and flew with them to the island of Tobago in the West Indies, just off the South American coast. It is years since she told me where they were hidden, but I can still hear her words:

" 'There is a rock with a pinnacle like the steeple of a church, with a big round boulder beyond it. They lie in the sea, off the end of the northeast promontory. The cylinder is between them, lying on a rock bottom, about a fathom deep at low tide.'

"That's all I remember, but you should be able to find it. Now repeat what I said."

I did. "I'm sure we can find the spot. Doane will have charts. And if we win, you will be paid—"

She stopped me with a kiss.

In a moment she moved the switch that set the helicopters spinning. The little machine rose off the placid sea, and a few minutes later we were skimming northward again, high in a warm blue sky. We talked of many things, but not of what we were thinking of most of all—that in a few days I must go back to the moon.

THAT night, when I arrived at Bakr's apartment, I found Gardiner returned from his Chicago trip. Though it was not early, he had a light going in his room, and was bent over a table scattered with loose sheets of paper.

He stood up as I entered, greeted me with a smile.

"And who was the friend you went to see?" I presently inquired.

"He is Lafollette. Head of the Chicago branch of Tranco—"

"I remember. We met him the other day."

"He has been a friend of mine for years. We had a delightful visit. And his heart is with us."

"Will he be able to help the moon?"

"He would like to. He's rich enough. And for that matter, Lewis might advance some funds. But there seems to be no way to get supplies and men to the moon. If we had a few more ships—"

He did not finish, but stood in the light, staring thoughtfully at the litter of papers on the table.

"And it is tomorrow night that Doane is coming," I said, suddenly appalled at the nearness of the time.

"It is. And we're lucky if we get away without a scrap. The whole world knows we're here, by this time, of course. And Metals has spies on us, in spite of Tranco's protection."

"Then we're watched?"

"There were two men in this room when I came in, going through my luggage," he said grimly. "They got out through the window. Nothing for them to find, I suppose."

"Have you notified the officers?"

"I thought it better not to. We are already under the protection of Tranco. To raise a disturbance might precipitate trouble. We must go tomorrow night."

Presently I told him about Leroda's gift of her father's great discovery. He seemed pleased, but much less surprised than I had expected. He soon fell to work again; he was still at it, late in the night, when I went to bed.

On the last day, Leroda and I were together all the time. We tried feverishly to amuse ourselves, to forget. But the hour of parting stared us in the face like a dreadful specter. A great concert and the thrills of a rocket race failed alike to take our minds from the dreadful reality.

At dusk we nervously ate a little lunch, and then walked in the moonlit gardens—looking up at the golden mottled world, on which I must go to war. And for a time we sat on a mossy stone bench, trying to enjoy the cool salty breeze from the sea, and the silver radiance that fell upon us in a mellow flood. But I found it impossible to be still; something made me want to tramp up and down. Leroda seemed to share my restlessness, and we roamed about, hand in hand, silent and clinging to each other in a sort of desperation.

I was to meet Gardiner on the beach, at midnight, just after the half-moon had set. We would wait in the darkness for Doane.

The time for parting came. A slight chill had fallen upon the garden, and the crisp air was lightly scented with the flowers of earth. A thousand stars twinkled feebly above, and the half-moon was just above the western horizon, red and wavering in the heavy air. Leroda was a slim white figure in the night.

"Good-by, John," she said. "I hope—I hope you can come back."

"I will—" I began, but a queer tension came in my throat, so that I could not go on.

I put an arm about her white shoulders, drew her to me. Her eyes were shining in the darkness, and warm lips came up and found mine. A fragrant wisp of hair drifted against my cheek. Then she was suddenly sobbing and clinging to me. The tremors of her slight body gave me queerly mingled pleasure and pain.

Then she thrust herself fiercely away, stifling her sobs. She put a little object in my hand—a slender package wrapped in scented paper.

"It is time," she whispered. "Go."

A moment I stood there, absently holding the little package in my hand, and staring at her slender form in the darkness. I felt a dangerous desire to stay, to forget the war on the moon. If I did not go down to the beach, the *Eagle* would depart without me. But I knew Leroda would never approve it.

With an odd choking sound, she suddenly turned, and vanished in a dark copse of shrubbery. A few minutes later I found Gardiner, briefcase in hand, waiting on the lawn by the orange trees.

CHAPTER XV

The Aluminum Tube

SWIFTLY we walked down the hard white sand of the beach. A fog was rolling up from the sea, and it shrouded all the dark world about us. But still we could hear the sound of the ocean, a restless, living moan, that seemed very strange to me. And it was strange, too, to be walking in a curtain of fog, feeling its cold breath against my face, to look back and see the bright lights of the land behind us, with the building we had left rising like a tower of fire, soft and misty and incredibly beautiful in the mantle of the mist.

At last we reached the edge of the lapping waves, and stood still in the night. Unconsciously, I trembled and drew my robe close about me, for my imagination increased the bracing chill of the keen moist wind to the deadening cold of the lunar darkness.

"Do you think Doane will come?" I asked Gardiner through teeth involuntarily chattering. "It is so far. Something must have happened. If he tried to land the ship to hide it, it may have been wrecked. Or the fleet—"

"If any man is worthy of our staking our lives upon him, that man is Paul Doane," Gardiner replied hopefully.

For a long time, it seemed to me, we stood there, staring into the black masses of flowing cloud that eddied, leaden and murky, about us.

"If he doesn't come pretty soon—" I began.

Gardiner looked at the gleaming dial of his watch.

"He is not to come until two. It lacks half an hour of the time."

I drew my cloak closer about my shoulders and waited, thinking of the wondrous girl I had just left, wondering if I should ever see her again. The thought that I probably should not was terrible. Fiercely, I clutched at the tiny object she had given me.

Suddenly a bright flash of white light lit the beach about us, illuminating the fog all about until it looked like drooping curtains of yellow silk. Even as the searchlight burst upon us, I felt a powerful arm behind me, that flung me face down on the sand.

A moment I lay there, mouth flung full of sand and the breath quite knocked out of me. I heard the curious hiss of an object under a D-ray; and the air about, when I jerked my head up, was faintly luminous from the radioactive gases evolved by the atomic rays. Suddenly then darkness was cut through by the narrow, piercing green beam of a disintegrator ray.

Abruptly, a little up the beach, there was a metallic clatter, as if some light object had fallen on the sand, then a great, gasping sob and a choking cry:

"My God—stop! You're killing—"

I saw a vivid, crimson spurt of flame from an old-fashioned automatic, heard the sharp crack of it, and the hum of its bullet close by us; then running footsteps that ended with the thudding fall of a human body upon the sand.

Alarmed and astounded, I was fumbling for my pocket D-ray when Gardiner's low calm voice spoke close beside me:

"It's all right, John. The men that were in my room, I suppose. I can hear better than they thought, after all my years in the thin air of the moon. I was ready. There was nothing else to do."

"Then you—"

"I killed them. I had to."

We walked a half-dozen yards up the sand, found two human bodies lying there, dark splotches in the night, bleeding and fearfully mutilated by the action of the rays, smelling pungently of burned hair and flesh. I turned away in horror.

"Too bad," Gardiner muttered. "But I had to do it."

We walked back to the edge of the water.

"Someone will be seeking them soon," Gardiner said.

I looked at my watch. It showed six minutes to two. Hours went by, it seemed; but when I looked again, only four and a half minutes had passed. I felt invisible men slipping up about us; I stepped nearer Gardiner, crowded toward the water. Looking back up toward the long, slender pillars of light in the mist, I fancied that I saw other lights flickering, nearer, just above the ground.

It may have been all imagination, but I felt that our enemies were closing in.

Then, out in the dark mists of the sea, I saw a faint swirl of phosphorescent mist—vapor that glowed faintly through the fog, with ghostly red and faintest scarlet and inpalpable purple. A play of color almost invisible—the radioactive light of the atomic blast.

"Doane," I rejoiced in a whisper.

It was but a moment later, it seemed, when I heard the sharp grating of a boat on the sand, heard a cautious hail, a few yards to our right.

Half a dozen strides over the sand brought us to the little metal boat. We sprang aboard, and I cried to the two oarsmen:

"Quick! I think they're coming on the beach."

Gardiner chuckled, but he did nothing to restrain the eager efforts of the men. Nothing untoward happened during our short crossing to the flier. It seemed only a moment until its silver side, ghostly in the foggy night and gleaming slightly in the reflected fire of the lights on shore, was visible above us. It floated on the water like a silver bubble.

WE reached a rope ladder, grasped it, and swung ourselves swiftly up to the lower ray-deck. The boat had been fastened to the ladder, for in a moment that was drawn up, with the little metal craft hanging to the end.

We hurried up into the bridge-room in the top of the ship. By the time we reached it, the vessel had already risen, and was flying eastward in the black fog, just above the waves. Doane and Bris rushed to shake our hands when we entered the room. They, as we learned, had landed the ship in the snow-fields of northern Greenland, and covered it with ice for concealment while they waited.

As soon as I could, I slipped off to the little stateroom that I had occupied in the great centrifugal wheel. Eagerly, I opened the little package that Leroda had given me. There was a tiny black box with a thin strip of crisp white paper by it. Written upon it, in Leroda's neat sloping shorthand, were the words in violet ink:

"Play this when you wish to think of me. L."

I opened the little box, from which rose a faint whiff of Leroda's favorite perfume, jasmine. Within was a tiny spool of thin steel wire for a magnetic phonograph. Quickly I adjusted the magnetized coil in the little instrument on the table, and turned it on. Leroda's voice sounded out in the little room, sweet and clear.

"John, before you is a long and dangerous way. I would not have you shirk the thousand dangers of it, just because of me. But I hope you think of me, when you are out in the loneliness of space, amid the perils of meteorites and of enemy ships, and when you are fighting on the cruel deserts of the moon. If it must be—I know that you can die fighting for your cause bravely."

There was a little pause, and an odd tremor of the silver voice. The tones were low; they were husky and vibrant with feeling. Suddenly the room grew dim, as my eyes brimmed with tears.

"I shall always think of you, John. I shall hope—as long as there is hope. If you ever come back, I will be waiting. I must keep hiding. But my radio-recorder will be tuned always on 5.678 meters. If you ever come, call that and tell me where I can come to you.

"You know that I love you—forever. Leroda."

When I heard Gardiner coming in, fifteen minutes later, I was still sitting, staring at the little phonograph. Desperately I picked up a book and tried to appear reading, to conceal my tears.

He told me that Doane had already located Tobago on our charts, had set our course for it.

When the sun came up we were a thousand miles from New York City, in the direction of the ancient Spanish Main, flying low upon the sea, as Doane thought that safer than venturing up into space. Four hours later we sighted the island, a dull green blur upon the sea.

We neared it swiftly, and Doane, with his unerring hand on the controls, brought our vessel down lightly as a feather in the clear blue water, northeast of the island. Only a few hundred feet away white foam was breaking over the rocks Leroda had described, one with a steeple like an ancient church, the other like a great bald head.

The little metal boat that had landed us at New York was launched again, and four of us put off for the narrow passage between the rocks, where the cylinder was supposed to lie. Gardiner, Bris and I went, and a young mechanic from the crew. In a few moments we reached the place, and Bris, at the oars, held the boat in position, while the rest of us scanned the hard coral bottom beneath the transparent water.

A half hour went by and I began to think we were going to fail. Then Gardiner caught sight of an object that he said must be what we sought. Certainly it was rather cylindrical in form, but half burned in the gravel and covered with a gray encrustation; I had passed it for a mere stone.

The mechanic sprang out, into water shoulder deep, and bent to raise the object. For a long minute he struggled, with his head under water, but he failed to move it.

"My God!" Bris suddenly cried in a voice that verged on panic. He dropped the oars and the current carried the boat away a little while he stared into the sky.

I looked up, saw what had alarmed him. High in the brilliant azure of the tropical sky were several white specks—tiny silver bubbles glancing in the sunshine. Ships of space—a score of miles high, perhaps, but dropping rapidly toward us.

"The spies on the beach!" Gardiner cried. "Metals knew we were here; they must have sent the ships after us!"

In a moment Bris had collected himself. With a single stroke, he brought the little boat back to where the diver had raised his wet and dripping head, slinging the water out of his eyes and gazing in bewilderment and horror at the silvery ships in the sky.

WITHOUT stopping to think, I leapt over the gunwale into the chill water. Gardiner spoke a quick word to the other man as I drew a deep breath and plunged beneath the surface. Together we bent, and the object in the sand stirred under our united efforts. We raised it, dropped it over the side of the boat and clambered in, nearly swamping the little vessel in our haste.

Bris bent his back to the oars, the dripping mechanic seized a second pair, and we darted toward the vast silver shell of the ship, which floated lightly on the water a hundred yards away.

Wet and chilled as I was and alarmed at the bright ships rushing down upon us, I watched Franklin in his eager examination of the thing we had retrieved from the sand. It was an irregular, grayish cylinder, perhaps a foot in diameter and three in length. He hammered at it with a pocket D-ray tube, broke away the gray mineral crust. The white gleam of metal was revealed.

In a moment we were below the open air-lock of the ship. The mechanic seized the ladder and steadied the boat while the rest of us lifted the encrusted tube to eager hands above. Then, desperately, we scrambled up the ladder ourselves. We did not wait to save the boat; the flier plunged upward when the last of us was

upon the ladder and was a hundred yards above the water when I scrambled through the opening.

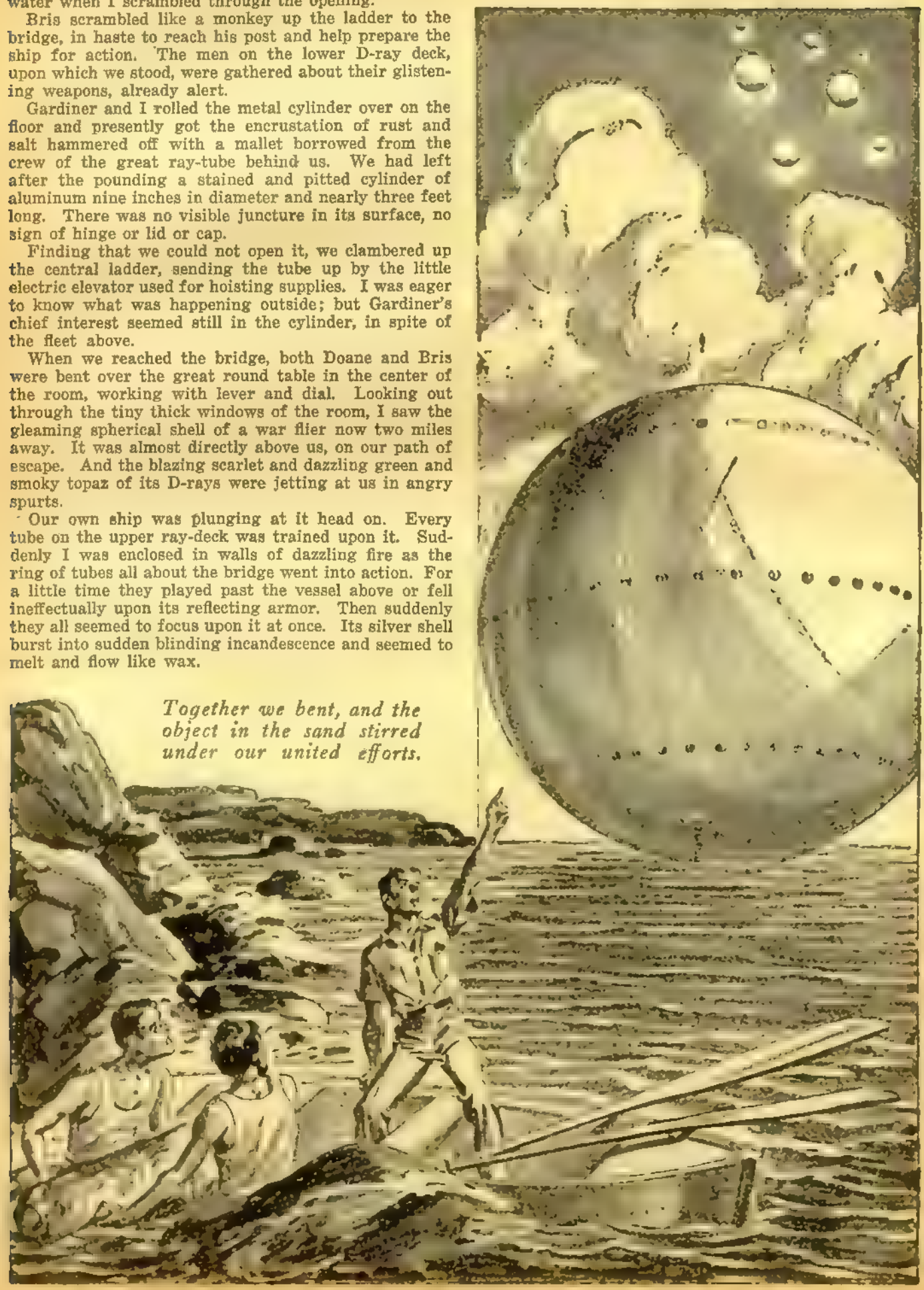
Bris scrambled like a monkey up the ladder to the bridge, in haste to reach his post and help prepare the ship for action. The men on the lower D-ray deck, upon which we stood, were gathered about their glistening weapons, already alert.

Gardiner and I rolled the metal cylinder over on the floor and presently got the encrustation of rust and salt hammered off with a mallet borrowed from the crew of the great ray-tube behind us. We had left after the pounding a stained and pitted cylinder of aluminum nine inches in diameter and nearly three feet long. There was no visible juncture in its surface, no sign of hinge or lid or cap.

Finding that we could not open it, we clambered up the central ladder, sending the tube up by the little electric elevator used for hoisting supplies. I was eager to know what was happening outside; but Gardiner's chief interest seemed still in the cylinder, in spite of the fleet above.

When we reached the bridge, both Doane and Bris were bent over the great round table in the center of the room, working with lever and dial. Looking out through the tiny thick windows of the room, I saw the gleaming spherical shell of a war flier now two miles away. It was almost directly above us, on our path of escape. And the blazing scarlet and dazzling green and smoky topaz of its D-rays were jetting at us in angry spurts.

Our own ship was plunging at it head on. Every tube on the upper ray-deck was trained upon it. Suddenly I was enclosed in walls of dazzling fire as the ring of tubes all about the bridge went into action. For a little time they played past the vessel above or fell ineffectually upon its reflecting armor. Then suddenly they all seemed to focus upon it at once. Its silver shell burst into sudden blinding incandescence and seemed to melt and flow like wax.



Together we bent, and the object in the sand stirred under our united efforts.

In another moment the other ship was falling in molten, flaming ruin, and we were plunging up past it, victor because of the better training of our crew, that had enabled them to focus their rays before we had been injured.

Two other ships remained.

We shot on into the sky. Already its liquid blue had darkened to blackness and a thousand stars were starting out. The two remaining ships hung above us, waiting and ominous. Doane used his space-screen bombs again, adroitly placing the vast spreading clouds of vapor to cover our flight and mislead the enemy as to our position.

I had no conception of the skill of his tactics at the moment. I realized what he had done only when we rose from the screen of gleaming white mist and saw the enemy vessels, each half concealed in ragged clouds of sulphurous blue, playing their rays upon each other!

Doane had gone between them, had so placed his screens that each terrestrial commander took his fellow for the *Eagle*. If they perceived their error when we came into sight, it was already too late, for both were falling.

Swiftly we sped on moonward.

Our own ship was practically unharmed. A ray from the first ship we had encountered had carried off a few square meters of our reflecting shell and one of the D-ray tubes had been fused in its turret, with the loss of its crew of three. But our speed was not retarded, and in a few hours the damage had been repaired and the dead consigned to space.

Then Gardiner and I set about the examination of the metal cylinder, which had so nearly cost us all our lives, and which, we hoped, held a secret that would assure the victory of the moon. Since we could find no way to open it, I carried it into the machine shop. Fastening it in a vise, I attacked it with a hacksaw, cutting off half an inch of one end. At last the top of the tube fell off, revealing the end of a great roll of papers.

CHAPTER XVI

The Battle of Smith's Crater

IT was a priceless document, indeed, that we took from that aluminum cylinder. Written in the modern "mentographic" shorthand and compactly phrased, it covered over a thousand pages in the original manuscript. It was, in fact, the laboratory journal of Dr. Vardon, covering over twenty years of exhaustive research. Gardiner was expert in the reading of this shorthand system, and I had studied it enough so that I quickly obtained a reading knowledge. All our waking hours, during the first week of the long voyage to the moon, were spent in study of its thousands of entries, which alluded to hundreds of related topics as well as to the principal object of Vardon's work—the rediscovery of the atomic blast.

Vardon, it appeared from a study of his records, had been a genius whom the world had failed to recognize, until Tranco had engaged with him on that disastrous venture that had cost his life. His ideas and theories were engrossing to us; much of his work has subsequently been published.

It was on the third day of our study, I think, that we came across the tattered sheet upon which were stated the fundamental equations upon which the disintegration of the gold atom is based. Gardiner fairly went into paroxysms of delight at the simplicity and beauty of Vardon's mathematical demonstration. In a few days more we had followed out completely the theoretical side of the matter and had turned to his notes on the practical application of the principle.

I am a fair draftsman and, working with Gardiner's aid, I devoted the last week of our voyage to drawing complete plans for a war-flier to utilize Vardon's discovery of the gold atomic blast projector. It was rather an ambitious project. I had never attempted such a thing before; in fact, a space flier had never been built outside the great yards of Metals at Pittsburgh. I kept a dozen men going over the *Eagle* with tape and rule to furnish me her dimensions. The new ships were to be far larger and more powerful, however, than the *Eagle*, which had begun her checkered career on earth before I was born.

According to our calculations, it seemed that the available power should be at least thirty-five per cent greater than that of the Orloff generators using the platinum group, and this, we felt, would give our new ships a vast advantage over those of Metals.

After some discussion, we settled upon spherical ships of the same general design used since the old vessels of Colon. The sphere has the advantage of the maximum of strength and of cubic content, with the minimum of weight and of exterior surface. Some of the vessels recently built on earth are spindle-shaped or cylindrical with tapering ends. Such a design reduces the resistance of the heavy air of earth; but in the moon's light atmosphere, or in the vacuum of space, it operates against the efficiency of the ship. (McRan's nine ships, which we had driven from New Boston, had been of this cylindrical type.)

I had hoped that we should be able to land near Theophilus, as I was keenly anxious to see father and mother again before the duties of my position called me to the battlefield. But Gardiner informed me that we were to land at the spot where we had left the moon—in the wild crater far west of the city.

He wished to get in touch with Warrington as soon as possible, to consider the matter of building a fleet for the moon. Some secret spot must be found, where thousands of men could be got together and supplied with food and materials for many months. It was a titanic undertaking.

The great silver shell landed with hardly a shiver in the dense thickets of yellow, thorny scrub, beneath the towering crater-rim. A few seconds later the men had it covered with the painted tarpaulins that concealed it from eyes in space; the ground-crew was trained, ready at rope and pole, to hoist the great canvas as soon as the vessel touched.

There was, in fact, almost a village in the crater. A hundred men stayed there, living in extensive compartments they had cut with D-rays in the crater walls. They had living apartments, store-rooms, and machine-shops; they cultivated irregular areas scattered over the crater-floor, to provide fresh vitamine foods for themselves and the crew of the *Eagle*. And this was only one of a score of the hidden stations of the moon's ship.

I spent a few hours walking about, picking a cautious way through the spiky scrub. Exercise was welcome after the weeks of inactivity on the ship; and the lesser gravity of the moon was a new delight after I had felt my leaden weight on earth. After a time I made my way through the passage in the crater wall, which was half natural defile, half artificial tunnel.

I gazed across the vast burned plain to eastward. Wild and incredibly lonely and desolate it looked, after my weeks on earth, yet there was something about the somber swarthiness of its mountainous sweep that drew me to it; this stern world was part of me.

Presently I saw leaping red dots far away, on the shoulder of a black mountain ridge. I focussed my pocket telescope upon them, and they resolved themselves into a little group of Selenites. As they drew

near, I distinguished the redoubtable Jenkins, the scout who had brought Gardiner and me to the ship. He was leaping in the lead, upon the vast crimson thing he called M'Ob. Half a dozen other moon-calves were with him, two of them of the smaller-bodied, more intelligent tribe called the Ossinae, which can be trained to carry D-ray apparatus and to fight with human cleverness.

The short, red-faced fellow had his mount set him down outside the tunnel entrance, and his monstrous creatures fed themselves upon an outcrop of schist, with a few cubes of sugar that he gave them by way of reward. He hurried importantly down the passage, and greeted me with evident pleasure and surprise. I went with him aboard the *Eagle*.

A squat, thick man he was, with nose large and red. Face and hands were burned brick-red by the merciless lunar sun. He wore an unkempt red beard, and when he removed his greasy topi in the ship, I saw that his tousled hair was also red. It seemed very odd, when he removed his goggles in the bridge-room, to see that his eyes were blue and very pale. They looked out of place in a man of such fiery red—for Jenkins even sported a tattered cloak of brilliant crimson velvet, which he wore over his dirty white tunic when he was in the shade.

His voice was rusty and thick, for in his lonely life he soliloquized far more to moon-calves than he talked with men. He strode pompously ahead of me into the control-room, with the bright red cloak thrown over his dingy garments, the worn fringe of it dangling against rusty bare shins.

DOANE greeted him cordially enough; with a wink at the rest of us, he ordered the steward to fetch siphon, bottle and glasses. Bris, the steward, served the four of us, and then himself. While the rest of us were barely sipping our drinks, Jenkins drained his glass at a gulp, and proceeded to turn the bottle up to his lips and take the fiery contents straight.

"A fellow don't get much like that in my trade," he grunted. "This rotten stuff they make in the craters—"

Abruptly he straightened, saluted, and fumbled inside his red cloak. Presently he drew a grimy leather belt from beneath his tattered tunic. From that he took a sealed envelope, which he handed to Doane with the words impressively spoken:

"A dispatch from Warrington, sir!"

Doane ripped the envelope open, and lost himself in the neat shorthand of Warrington. Jenkins attempted to read over his shoulder, but to judge from the disgusted grimace of the old scout, he did not understand the system.

Watching the face of the young space-captain, I saw keen interest grow to serious concern. He read the message twice through, and looked up soberly at us.

"The situation is getting serious," he said. "On the morning of the moon-day after we sailed, Warrington left Theophilus to march to the relief of New Boston. He was to be followed by supply trains, and by a caravan-load of food and arms which the Assembly was to gather in Colon."

He began reading little excerpts from the dispatch:

"The blockade about Theophilus could do little to hinder our departure, as our D-rays covered the line of march; but the supplies which were to follow were mostly destroyed as they left the city, by the fleet which has possession of the space-port. And the caravan which left Colon was attacked by a horde of moon-calves, which were well armed, and are believed to have been officered by Tellurians. The supplies were lost, and most of the men with the party killed and eaten, though some few escaped on their faithful Selenites.

"Since these minor disasters, though the Assembly is still in session, nothing has been done to forward supplies. The Assembly lacks real authority; it only commands when men wish to obey. And it seems as if a sort of apathy has fallen on the moon. There are men, and food, and arms, in plenty. Armed forces could get them to us in safety. But it seems that hope is dying. In the last month I have been forced to rely upon private subscriptions raised by that noble spirit, John Adams, instead of the former levies of the Assembly. Unless we win a victory, and that soon, the war is over."

I flushed with pride at such a mention of my father.

Doane read on: "I have been forced by lack of supplies to give up the advance on New Boston. We have spent two lunar nights camped in the mountains about midway between Theophilus and New Boston, quartered in mine-shafts and passages cut with the D-rays. We lack sufficient food, as well as munitions and equipment. There are not even enough atomic heaters and liquid air cylinders to make our improvised barracks habitable. Half the men are sick from the malady due to the lack of vitamine J in the synthetic air they have been forced to breathe in the barracks during the nights. Hundreds are dying; and there have been thousands of desertions—men have left in whole companies, after each terrible night, to try to find a way back to the city or to one of the smaller mining communities, some even going toward New Boston to throw themselves upon the mercy of Humbolt. I can hardly blame them.

"Those still able to answer the roll-call are starved, ragged, poorly equipped. Humbolt's army would not hold together an hour under such conditions; I must praise the loyalty and devotion of these poor fellows.

"The matter is coming to a climax soon. Humbolt has left New Boston, and is marching upon us. He is reported to have nearly forty thousand men, about four times as many as I can muster. They are mostly negro infantry, who have proved that they can stand the intense heat of the lunar day much better than unacclimated whites. . . .

"I am preparing to retreat, for we cannot hope to hold this position against such an overwhelming force. Gardiner, and Adams, the engineer, will return with Jenkins and meet me in the vicinity of Smith's crater. Doane will take to space, collect the other ships, and try to keep our movements from being watched by the Metals fleet."

In his own words, Doane added: "I imagine his plan is merely to evade Humbolt for a few days. It will be impossible, of course, for the Tellurians to spend the night away from New Boston, and if the battle is delayed a week or so, the terrestrial general will be forced to retreat to the city for protection against the night. But our general may have something more in mind; this is the way he closes the dispatch:

" 'We must take a decisive step, or soon we can take none at all. We have discouragement to fight—a deadlier enemy than Humbolt's D-rays. Warrington.' "

An hour later, Gardiner and I had set out with Jenkins for Smith's crater. Jenkins rode in front, upon his great, green-eyed, scarlet beast, M'Ob. The tremendous leaps of the vast, long-legged creatures were well timed, so that the half dozen of them rose and fell as one, sweeping through the air only a few yards apart on the leaps of a hundred yards or so.

So close together we sped that Jenkins, mellowed perhaps, by the long pull at Doane's bottle, grew very talkative. He had to shout in a shrill tone, and even then half of his words were swept away in the wind of our swift flights, or lost in the rattle of stones and the crashing in the brittle yellow scrub as the monsters landed and leapt again.

He began with remarkable accounts of his affairs with women in the cities. But soon he was boasting of his former exploits in the lunar wilderness, of fabulously rich mines he had discovered, of impossible adventures with the Ka'Larbah and other tribes of wild moon-calves. He went even as far as to begin a story of how he had been captured, some years before, by the M'Dawils, that half-mythical band of monsters, and carried prisoner to the other side of the moon, to a low crater valley of warm and equable climate and marvelous vegetation, where there was a tribe of moon-calves having a civilization far above that of the Ton'Kapl empire in the great crater Tycho, crushed by the first expeditions from earth.

But while the old scout was in the very middle of his extravagant description of this marvelous place, with its strange inhabitants and its incredible wealth in precious minerals, his tongue became unmanageable. For a time he struggled on manfully, stumbling over the more difficult words.

"Then theysh took me to a palish—pa—palace of purple cryshtal—clistal——"

With a final hiccup, he dropped his head forward on his breast, and presently went to sleep. The intelligent creatures that carried us leapt on as he slept, obedient to his last uncertain gestured orders. Hours later he woke again, grumbling and sullen, and took a great pinch of wiz-wiz, that strange stimulating drug of the lunar forests. Despite my eager questions, he would reveal no more of his adventures back of the moon. I was never really certain whether it was all a flight of imagination, which his headache killed, or whether it had been half true, and he did not wish to share his secret.

We had vacuum bottles of hot coffee, and bags of sandwiches; and Gardiner and I ate and drank and slept as we went . . . leap . . . leap . . . leap.

IT was thirty-six hours after leaving the ship when we arrived at Warrington's camp. We found it by the rough grim walls of Smith's Crater—a ring of impassable black granite walls, twenty miles across, encircling a torrid, arid waste. Warrington had pitched his camp outside those sheer, unclimbable walls, behind a little ridge that offered some protection against the army in the rear.

Humbolt, with his 40,000 negro infantry, was also camped along the crater wall, four or five miles behind Warrington. He had outdistanced our general in the last march, and caught up. He evidently intended to rest his troops, advance again, and score an easy victory.

The sentries evidently were expecting us; we passed the lines unchallenged, and soon were at Warrington's little tent. He was away, however, visiting the little squad of men who were cutting trenches on the hill behind us, a white cloud of dust rising from their D-rays to mark their location.

We dismounted and waited under the fly of the little white tent, out of the driving heat of the sun. In a few minutes Warrington was back, heavy-eyed, with the face beneath his white topi drawn with fatigue and worry. He took scant time to greet us, or to learn of the results of our expedition. Even as he listened to Gardiner's report on the new gold atomic blast, he frequently turned away to give orders to hurrying aides. Evidently something was afoot.

In a few minutes we left the tent. I saw that the exhausted and half-sick men were being roused from the crude shelters where they had sought relief from the cruel sun while they ate their scanty rations and tried to sleep in the furnace-like air.

With a good deal of wonderment, I saw that camp was being broken, that the men were making ready for a march, while the work of fortification was going on busily behind them. Soon the whole army, except for a few score of men at work on the hill, was marching off down the crater wall, away from the enemy.

I could not understand the maneuver—it looked like a mad and precipitate flight, with disaster and annihilation at the hands of the pursuing Humbolt as the inevitable outcome.

The men were hardly able to march. Half of them had white rags bound around their heads, in place of the pith helmets that were needed to protect them from the scorching, blistering radiation of the sun. Uniforms were tattered and patched, with red-sun-cooked bodies beneath them. And from sickness and hunger, men staggered as they walked, threw away blankets, canteens, trinkets—everything but arms and pitiful hoards of food.

How wonderful the courage, the devotion to their commander, that led them on under such conditions!

On and on we went around the rim of the crater. At last we had covered thirty miles; we were half way around, and still Warrington kept by the wall. We stopped for a brief rest; the stumbling men threw themselves down in scraps of shadow offered by boulders and patches of dense spiky scrub, to consume their last treasured bits of food.

After an hour or so, we went on around the crater.

At last I understood. It was late in December; no doubt Humbolt's negro soldiery, certain of an easy victory over Warrington's ragged troops, were indulging in a Christmas celebration. Warrington meant to come upon them by surprise and in the rear—by a march all the way around the crater!

And that is exactly what he did do. His maneuver was as simple as it was daring and brilliant. Doubtless the Tellurian commander had guarded his other flank; but he could not have expected the war-worn troops of the moon to encircle the crater and take him from behind.

Our desperate, half-starved troops, exhausted as they were by that sixty-mile march about the crater's rim, took the terrestrials completely by surprise. They fought with demoniac, insane energy. There was no forewarning of our attack. The few sentries in the rear were dozing in the shade. The sultry heat of the lunar sun, with the effects of celebrating the Christmas season with the fiery spirits distilled in the craters, had been too much for them.

Our men dashed forward in thin, ragged lines; but they were determined, desperate, intent on victory; they knew that their sole chance of life depended on winning. Humbolt and his officers tried to rouse the negroes and to rally them; for a few minutes the resistance was spirited.

But they failed to withstand the impetuosity of our onrush. Their ranks collapsed and the blacks fled screaming, almost in supernatural fear. They distrusted the wild life of the moon—regarding the wild moon-calves with superstitious horror.

Humbolt and his officers escaped; indeed, they got back to New Boston with more than five thousand men, but those five thousand were without morale and without equipment.

The results of the victory were far-reaching.

Warrington took twenty thousand prisoners. He captured a vast amount of stores, arms, equipment of all sorts, including three hundred field D-ray tubes, and twenty-seven thousand hand rays.

When our men slept again, it was with full stomachs and in new uniforms, sheltered from the sun by captured tents. By the time the sun set, a few days of hard marching had brought us back to Theophilus,

with all that vast amount of new equipment, and captives that outnumbered our troops two to one.

I was with father and mother again. It was a gala day when I came home. We had a glorious Christmas dinner in honor of the reunion, and talked for a long time afterward in the gay little drawing-room. I told about my trip to earth. Finally, I told them of Leroda, and as a climax, played the magnetic record of her voice. My parents were properly delighted—though I believe mother cried a little afterward.

The victory at Smith's Crater sent a wave of new courage over the moon. In every city and in every community, men freshly pledged themselves to the cause; money, food, and recruits began to flow toward the camp of Warrington again, while the Assembly had regained its position of authority.

In the enthusiasm of the hour, even the people of New Boston rose against the soldiers Humbolt had left in the city, and expelled them before the defeated general had found his way back; though of course the fleet remained in possession of the space-port and the buildings about it.

I had at once resumed my old position as Warrington's engineer-attaché. Some two days after the setting of the sun, he called me from my work (I had been designing cradles and equipment that would be needed in the building of the fleet).

"John," he said, "I want you to prepare to leave with me in twelve hours. We are going outside the city. Jenkins will carry us on his moon-calves. Space suits have been provided.

"Very good, sir. And where——" I stopped short, abashed, realizing I had no right to ask the question.

He smiled, clapped me warmly on the shoulder. "That's all right, John. It is to be a secret conference," he said. "A meeting of men from all parts of the moon."

CHAPTER XVII

The Conference at Kurrukwarruk

FATHER and mother were still in Theophilus; they had been there since the trouble that had brought on the war. The Firecrest mine had been left in the care of Valence and her young husband, Tom Dowling. The settlement was so isolated that it would have been difficult indeed to transport its production of metals from its mines to Theophilus. Since the end of commerce with the earth, the only demand for metals came from the quickening industries of the moon, which was easily satisfied from works nearer at hand. And father was prominent in the Assembly; he would not have been willing to leave the center of activity even if the mine had been in operation.

After my meeting with Warrington, I went home, to find that father, too, was preparing to attend the secret conclave. He retired early, to rest for the long trip. But mother and I sat late in the tiny but rather luxurious living-room of their apartments in the great south wing of the roofed city.

She had me play again the sound record Leroda had given me. My eyes filled with tears as I listened to the vibrant silver tones of the girl who was now a quarter of a million miles away. Mother smiled mistily.

"She has the grandest voice," she said.

She had a little "stereo" movie camera, with sound recorder, that had been a childhood gift to her from my grandfather. Now we darkened the little room, and I hung up the screen while she found the cans of film. For a long hour we sat there, in the warm golden glow of the atom-disrupter heater, talking a little in low tones, as we watched scenes from mother's childhood and youth. I cried out in pleasure when father first came into the scenes, as a gay slender boy at a party. Then there was the wedding, and the scenic story of a trip around the earth. And presently I saw dimly remembered events of my own childhood, and heard long-forgotten voices ringing fresh and clear from the screen.

The picture followed our voyage to the moon, with its fear, and the sorrow of little Fay's death. It showed the hardship and the adventure of our first years on the moon, and brought vividly back to me the delights of my romantic boyhood about Firecrest.

When we had come to the end of the film—the last few scenes showed the wedding of Valence, and then her bouncing child, and a view of the city of Firecrest taken as mother had last left it—we did not turn on the lights, but sat in the gloom. I had fallen into a curious revery of the past. It was the sleeping period of the city, and without all was darkness. (The atomic lights have always been turned off for eight hours of every twenty-four, for the over-stimulation of constant light is as destructive to terrestrial plants as it is to humans.)

Suddenly I heard a suppressed sob from mother's chair. With an odd tightening in my throat, I got up and went over to her and knelt beside her, with my arm about her dear, slight shoulders. I had hardly thought, before, of what it must mean to her for father and me to go away. She took my hand, and patted it, and clung to it for a little time. Then she spoke, in a dry, husky little voice:

"I understand, John. I'm glad you feel it. But I want to do my part. I have faith. And if anything happens—we"—she faltered a little, finished pluckily—"we have such good times to remember."

And suddenly she stood up, as vigorous as a girl, and turned on the light. "Now John," she said practically, "you must be off to bed. You've a hard trip before you."

I kissed her, and went obediently, leaving her standing in the room, looking after me with a tear, I think, in her eye. But I could not sleep, for thinking of the golden time of peace. If it had lasted, I might have found Leroda, and brought her back to a happy world, to live near father and mother.

More than a dozen men were gathered at the air-lock at the appointed time. Warrington was there, Gardiner, and my father, with two or three of the other leaders of the Assembly, a few of the engineers who had been working with Gardiner and me on the problems of the new fleet, and two or three of Warrington's officers.

A score of soldiers were there, in space-suits, with sets of armor for us. Soon we were all grotesque creatures in the strange suits of metal, quartz glass, and impregnated fabric, shoulders bulging with oxygen tanks. The thick helmets of metal and quartz were screwed down; and we were in communication with one another only through the short-wave radio sets that each suit carried.

WHEN all of us were ready—there were thirty-nine, counting the guard—the inner door of the lock was opened, and we filed into the great cylinder that extends through the city's wall. It was closed and sealed behind us, and Gardiner opened the valve that let the air about us hiss out into the frigid vacuum of the night.

The air in our suits expanded until we were squat, thick-limbed monstrosities. All the sounds of the city faded, until everything I could hear was the quiet hum of the little motor that kept the air circulating between my double-walled helmet and the coils where

At last the pressure was equalized, the outer door was opened, and we walked out into the lunar night.... In the bright-flecked darkness of it swung the earth, near the full, a vast globe of liquid emerald, alight with misty splendor.

it was purified and re-oxygenated, and the occasional ghostly voice in the phones.

At last the pressure was equalized, the outer door was opened, and we walked out into the lunar night. The sky was a void of intensest blackness, sprinkled with a million cold, many-colored stars, and richly powdered with the luminous silver dust of nebula and galaxy. In the bright-flecked darkness of it swung the earth, near the full, a vast globe of liquid emerald, alight with misty splendor. The radiance of the green planet fell in a flood of ghostly argent upon the silent crust of snow and frozen air that blanketed the weird rough wilderness before us, shimmering fantastically upon the three sheer peaks beyond the city.

In all that world of night, everything was white, still, lying in death or frozen sleep until the sun would bring the spark of life—all save the moon-calves, the natural masters of the planet.

In a few moments we saw a score of the great fantastic beasts leaping swiftly toward us through the earth-light, vast scarlet bodies a-glitter against the still white mountains, huge green eyes glowing with pale phosphorescence.

Jenkins was upon their leader, hardly recognizable in his gleaming silver space-armor. But his voice sounded familiar enough in the phones when he spoke.

"Good evening, gintlemen, and the best av wishes to ye!"

He flung out ludicrously thick arms in the gestured command that sent his score of weird beasts to their knees before us. In a few moments we were mounted, two to an animal. Another, and we were off through the silent, frozen night, upon scarlet monsters that leapt swiftly and surely from snow-covered boulder to peak encrusted in frozen air, beneath the white light of the motionless earth.

I suppose that Warrington had already given Jenkins his orders. I heard him say nothing to the old scout who was leading us unerringly, however, along a path that carried us into the mountainous region between the three great cities, Theophilus, Colon, and New Boston.

We traveled some ten or twelve hours, in which time we must have covered half that many hundred miles. We were almost upon our destination before I perceived it. We were crossing the floor of a relatively small crater many miles northwest of Hipparchus. Abruptly I saw the outlines of a city's roof and towers and domes above the flat, white expanse about us, clothed in a silver blanket of frozen air.

The oddly shaped towers and the irregular roof had been cunningly designed to appear to the casual eyes as part of the natural peak in the center of the crater. A hidden city was here, surrounded by towering crater walls. Invisible, even when one looked upon it, unless he knew its odd outlines.

Warrington's voice rustled in the phones. "Gentlemen, this is Kurrukwarruk. A hidden city. It was built by a patriot who grew tired of the rule of Metals long before the war. He located a mining prospect here, and built this secret city. He has already aided the cause, and he gives us the free use of his location. We have many secret allies."

Another half an hour found us dismounted and inside the air-lock of the little city on the mountain, removing our cumbersome armor. It was a good-sized community—the roof covered a hundred acres and the population was about five thousand, of whom nearly two thousand were men who had been employed in the building of the city, and who now constituted its garrison. The whole mountain top was a great fortress; every tower of the city carried a battery of D-rays.

Inside the air-lock we met the builder of Karrukwarruk. He was of Teutonic extraction; his name was Meyers. A corpulent fellow, he had an absurdly thin, piping voice. It seemed that he had been born on earth, and had inherited a hatred for Metals Corporation. He had come to the moon in youth, located the valuable minerals in this crater, and worked the deposits secretly, accumulating a fortune and building his hidden city, against the day when the moon should revolt. He seemed to have a stubborn love of liberty; he had placed the city, and his entire personal fortune as well, at Warrington's disposal.

The secret conferences must have been planned weeks before. Men were there from all over the moon. There were bankers and soldiers from Colon—Crompton, Vendome, Wong Kow, and Olaf—scientists and military authorities from New Boston—Leforge, Handley, and others—miners and scouts who owned no particular home. Starling was there—that romantic poet-adventurer who was one of the few who had visited the terrible hidden side of the moon, and whose life was later sacrificed on the ill-starred Venerian expedition of Captain Cord.

The first action of the conference was to choose Kurrukwarruk as the permanent capitol of the moon. The great statesmen were opposed to having it located in any of the large cities, as it would be the object of Tellurian attack, unduly endangering the city's population. Then Kurrukwarruk was centrally located and rather easily accessible—when one knew its location—from any of the great cities. It was equipped with all the necessities of civilized life. Its fortifications were so carefully planned and so strong that it seemed improbable that it would fall, even if discovered and attacked.

THE meeting went on for several days. Important problems were solved, concerning the military organization of the moon's forces, and their support. Plans were made for raising reinforcements and supplies about Colon, as that district had hardly been touched by the war.

Apartments had been assigned to all of us in the most desirable quarters of the city. I shared a suite of rooms with a young officer, Captain Benedict, a secretary to the Financial Director. He was handsome in appearance, rather dashing, and noted for several feats of intrepid courage. Early in the war he had led a daring raid on the space-port at New Boston, capturing it in the face of considerable odds, though it was soon lost again to Van Thoren's fleet. I think he had secured his transfer to the staff of the Financial Director, because he was not satisfied with his preferment in the regular army.

I had known him at the University; in fact, I had felt almost his friend, until I had once seen him in the company of Leroda. I did not like his manner toward her, and I had dropped him. Now I began to think, however, that I had let jealousy obscure the character of a brave and noble patriot.

Slowly the conference got around to the important thing, to the question that was the real purpose of the meeting. Early in the course of the discussions, Gardiner had addressed the assembly, giving the results of the trip to earth, and telling of his meeting with Lafollette in Chicago. He had concluded his talk with what was, for one of his quiet manners, an unusual burst of oratory.

"Gentlemen, Tranco is the hereditary enemy of Metals Corporation. Every man in it, from President Lewis down to the laborers who toil in the factories and ships, feels the strongest antipathy to our oppressors. Openly, publicly, Lewis dares to do nothing.

But this Lafollette is braver than his fellow-directors. He is rich. And he is willing to stake his fortune and his life upon our cause. He is willing to send us money, supplies, and men, if they can be brought to the moon. And while he made his offer as a private man, I know that Lewis is unofficially behind him, with all the vast resources of Tranco.

"It may seem hopeless, gentlemen, to dream of bringing weapons and men from earth to our aid. But due to the generosity of a friend of young Adams, here, we have a solution to that problem. We have Dr. Vardon's great discovery of twenty years ago—the gold atomic blast. That is the invention with which Tranco vainly tried to throw off the yoke of Metals, failing because her new ships were discovered before they were finished.

"Fellow patriots, we have in our hands the means of building a fleet that can go to earth to bring back Lafollette and his army. We have the means, even, of building a fleet of war-fliers that can sweep the vessels of Metals from space and make us the equal of the greatest corporation on earth."

There had been a lot of cheering when he finished, but not much else. Men had to take time to think. But a hundred great minds were playing with the idea. It was some days later that Paul Doane arose and proposed definite plans for the construction of a fleet on the moon, with which we could voyage to earth to get Lafollette and his men. There were a thousand difficulties in the way of it, but he had gone over each of them with Gardiner and me and some of the other delegates, and his logical arguments convinced the assembly that it might be possible to collect the thousands of skilled mechanics, to find a secret place for them to work, and to provide them with food, with shelter for the lunar nights, and with the vast supplies of raw material that would be needed.

Two or three more days went by, partly devoted to consideration of routine business, though the great project was never far from our minds. Slowly the plan crystallized, until we came to the selection of a secret workshop for the building of the fleet. John Adams, Sr., my father, rose at once to suggest that the ships be built at Firecrest.

He set forth its advantages. The mines would furnish all the metal required for the work. The city would shelter the men. There were farms and synthetic food plants to feed them. The locality was so remote that interference was improbable.

As he was talking, I remembered the great cavern at Firecrest—the vast chasm in which I had lost myself as a boy, escaping by the merest accident. I waited impatiently until father was done, then sprang impulsively to my feet and informed the assembly that I could point out a spot where a thousand vessels might be built without discovery, even if searching fleets cruised over a hundred times. I got a little excited; but with a few questions from Gardiner, I told all I knew about the cavern.

I suggested that it could be lit with atomic lights, that a battery of D-rays would soon clear the jungle off the floor, and that the narrow shaft through which I had entered could be widened and cleared to permit the completed ships to leave. And it was near enough to Firecrest so that metal and supplies could be easily brought from there.

With that addition, the program was unanimously approved, and definite plans were laid to carry it out.

It was agreed that Gardiner, father and I should set out at once for Firecrest, to begin making such preparations as clearing the cavern, widening the entrance, and getting a supply of food and metal as fast as the few men now at Firecrest could provide them

The delegates from other parts of the moon promised us engineers and men as soon as they could be gathered. Warrington was returning to his army at Theophilus, and Doane to his embryonic fleet. It was yet several days to sunrise—there was time in abundance for us to reach our several destinations before the coming of the luminary signalled the resumption of hostilities.

It was the sleeping period before we were to start. As I returned, after the last meeting of the assembly, to the apartment that I shared with Benedict, the dashing secretary to the Director of Finance, I heard something through the closed door that made me burst into the room in sudden fury.

" . . . I shall always think of you, John . . ."

Those dear words, in the rich, vibrant voice of Leroda, husky with the depth of her feeling, came ringing sweet and clear from the moon. Someone was playing the record she had given me!

I found Benedict, my handsome fellow lodger, bending over the little phonograph—through some accident, I had left it on the reading table.

" . . . If you can come back, I will be waiting. . . ."

The secretary was intent on that wondrous voice. Startled out of his usual rather haughty dignity, he now jumped up, reddening. I jerked the little instrument out of his hands and stopped it, then reached for his collar. I was almost beside myself; it seemed a sacrilege that he had heard those treasured words.

"Why, what's the matter, Adams?" he sputtered. "I beg your pardon. I don't see—What the devil—I thought it was a standard record, a song or something."

"A standard record with that on the case?"

I pointed fiercely to the words.

"To John Adams. Play this when you wish to think of me," written on the case in Leroda's neat characters.

Benedict's flush of confusion changed to a red flood of anger.

"Adams, if you let word of this out, I'll slaughter you like a dog!"

"You may name a meeting place—" I had begun, when I recovered myself. "No, as officers, we cannot do that. But on the day that peace is made——"

He turned and strode from the moon.

CHAPTER XVIII

In the Firecrest Cavern

A FEW hours later we were in our space-suits. Most of the delegates were returning to their cities, though enough remained to constitute a permanent corps for the new executive government. Greenville, the Financial Director, was remaining, with Benedict, the strange young man who had become his secretary—I realized, after cooling of my feelings, that the fellow had committed no worse crime than to satisfy a natural curiosity. I should not have left the machine where he could get his hands on it. Before I left, I apologized for my hasty words; and he, smiling, begged my own pardon. We parted on good terms.

Jenkins, with his Selenites, was to convey Gardiner, father, and myself to Firecrest, and would return immediately to take Warrington back to Theophilus. The General had further business connected with the organization of the permanent government, which prevented his leaving Kurrukwarruk for a day yet.

The four of us, with a toast to the liberty of the moon still ringing in our ears, stepped into the great cylindrical air-lock, shut the inner door, and opened the valve. Warrington, Meyers, and Greenville beyond the great transparent door of quartz, waved us a last farewell and hurried away.

The last of the air hissed out, with a dying moan. Jenkins opened the outer door, and once again we were in the fantastic ghostliness of the frozen lunar night. The old scout, squat and silvery in his space armor, signalled to his moon-calves. The scarlet, glistening elephantine monsters came hopping toward us on their enormous grasshopper legs, across the glistening plain of frozen air.

Our guide selected four of the fleetest, which, with only a single passenger, can easily make fifty miles an hour at a time. I leapt into my saddle—for I have always had a curious horror of the feel of a scaly tentacle about my waist—Jenkins and Gardiner and my father allowed the long tentacular limbs to lift them up, and we were off.

Jenkins was in excellent humor, having been well fed and cared for during the week at Kurrukwarruk. He regaled us with an interminable series of droll anecdotes in his rusty voice. His stories related mostly to his childhood. He told us that he had never known his father, that he had been brought up on the moon by a crabbed, old Irish prospector, Tim O'Sullivan.

The old scout's voice rang endlessly in the phones. In the vacuum of the night, no foreign sounds broke in upon his narrative.

O'Sullivan, it seems, did not claim to be Jenkins' parent, but said that, while on an expedition in search of a legendary mountain of radium toward the Rook Mountains on the eastern "rim" of the moon, he had come upon a horde of the Ka'Larbah, the most savage of the wild Selenites, about a space flier fallen and wrecked in the desert far south of Kepler.

O'Sullivan had made his way into the ship—it seems that he was on fairly good terms even with those blood-thirsty monsters. He had rescued two living people from the ravenous moon-calves, one of them Jenkins, "thin, a little yaller-headed shaver," as he said. The other was a man, who gasped out a brief tale of meteoric collision and of a terrible struggle to save the ship, that had ended in that crash on the deserted limb of the moon. The survivors had been there nearly a month, dying of their injuries, of hardship and starvation, and maintaining a hopeless defense against the Selenites. One by one the men had died, but they had saved the life of the boy.

Thus Jenkins knew nothing of his parentage—so far as he was aware, he might have been destined for a life of ease, luxury, and prominence, but for the wrecking of the ship. His fellow survivor had told nothing of the boy's people, he had died before his terrible story was finished.

O'Sullivan, it seems, had been a curious man, hardly known in the cities, and hardly tolerated even among the wild Ka'Larbah. He had taken the three-year-old boy to Colon with him, and there placed him in the hands of a woman of uncertain social standing. There Jenkins had lived for five or six years, attending school a little and learning far more by roaming the curiously cosmopolitan underworld of the lunar city.

Then the woman had suddenly departed, in the company of a "tall man with whiskers and a glass eye." The lonely boy, perhaps not much the worse for the loss of his guardian, had roamed the streets for months, earning his bread for a time in one of the secret dens where the forbidden drugs from the lunar forests are sold.

Then O'Sullivan, returning from one of his mad wanderings in the waste places of the moon, had rescued the child, and taken him along on the next trip, which, according to Jenkins' story, took them due south, to the left of the Doerfels, to a point where the motionless earth set behind him. There they had encountered a new race of moon-calves, who were armed with polished rocks, and who guarded a dead city of white metal. After two years of incredible adventure beyond the pale, they had arrived in Theophilus with, as Jenkins put it, "about a peck of diamonds." For a brief period they had lived in incredible luxury "with a red-headed woman." But soon O'Sullivan had squandered or gambled away his fortune, and they had returned to the desert. Three years later, when Jenkins was fourteen, O'Sullivan was executed with the captured crew of a space-pirate, and the boy had escaped only because of his youth and presumed innocence.

To the accompaniment of such a story, which was probably not wholly true—yet which subsequent discoveries show to have been far from altogether false—the nine or ten hours of the trip to Firecrest passed in a few moments, it seemed.

I WAS astonished when I saw the city of my childhood rise before me—a great thick disk of metal and glass, half a mile across and two hundred feet high, resting on the glistening white crater-pitted desert, close against the rim of the two-mile crater in which the mine-shafts are located.

A few more rushing leaps of our red-armored, hurtling mounts brought us to the air-lock. There Gardiner, father, and I dismounted. The stocky, silver-armored figure of the old scout waved us a farewell, and leaped away upon old M'Ob among the shimmering ice-clad spires of the lunar desert until he vanished in the feeble light, with his "God be with ye" ringing in our ears.

We had rung the bell, and the air-lock was quickly opened for us. It seemed very strange to pass so suddenly from the glimmering ghostliness of the lunar desert in the fantastic earth-shine, seen under the weird spell of Jenkins' narrative, into the warm rich glow of the atomic lights.

The familiar city of my youth seemed queerly deserted. There were thoughtless, happy children enough, and anxious women. But most of the men were gone, to join Warrington's army or to seek employment elsewhere. Everything was quiet, deserted.

Valence and Tom Dowling greeted us in glad surprise. With motherly love my sister exhibited little Tom Junior, a plump, pink little fellow, just learning to talk. It gave me an odd feeling to think that I was now an uncle.

Gardiner and father and I soon put a different aspect on the quiet town, with Tom's eager aid. The townsfolk had been enormously glad to see father. They held a great banquet in honor of his return; and they showed themselves willing to perform superhuman feats of toil for him. Soon we were working the mines again. Most of the men were busy there; but even the women showed themselves eager to work in the machine shops and synthetic food plants.

Father took charge of the work in general of seeing that raw metal and food were ready. Gardiner went over my plans for the ships, to determine the best methods of procedure, and to find what tools and technicians would be required. Until Doane came, he was "Admiral" in authority over everyone. I was to undertake some researches to perfect the D-ray; but before beginning that, I asked for and received the job of opening and clearing the great cavern.

Forty hours ahead of the rising of the sun, I left Firecrest with a dozen men in space suits. We drove atomotored tractors, that dragged three of the great mining D-ray machines, borrowed from the gold workings. When we arrived at the little crack that was the opening of the great cavern, I fastened the end of a long line about my middle, and ventured with a searchlight, a thousand feet down the fissure, to where

it widened into the cavern proper. A few measurements and a simple calculation enabled me to determine the place to begin our vertical shaft.

Twelve hours of herculean toil saw a circular vertical shaft, a hundred and fifty feet in diameter, sunk three hundred feet through the roof of the cave. Then I sent the men back to the city to rest while a fresh crew came out to operate the great boring machines.

Fatigue drove me back to the city for a few hours' rest. But I did not sleep until I had sketched plans for the great metal valve, which was to close the top of the shaft. I left a dozen men busy on the blueprints of the valve, its frame and hinges, and the atomotor which was to operate it.

The men worked on at the shaft in my absence. When I got back, the boring was six hundred feet down. I brought back two additional tubes, and the work went on more rapidly than before. It was a splendid sight to see the five red beams, like fingers of fire, driving down into the pit from the vast glistening machines on its rim, the living rock melting beneath them into a flaming inferno of blinding light, with the inert gases of the disintegration rising in a furnace-hot hurricane. A strange contrast—beneath was the pit of flame, with the blistering heat pouring from it, and above about us all was night, where the

And the huge black thing, seemingly dazzled by our battery of blazing searchlights, turned and winged a silent way off down the dark passage to westward. . . .

chilling gases from the pit, cooling, condensed in a sort of fog, and fell, a crystal snow, upon the huge machines and the busy men.

Twelve hours later, when the sun came up, a splendid ball of white flame, we were down thirteen hundred feet. In ten hours more, at twenty-three hundred feet, the fissure we were following opened out into the vast cavern. The incandescent bottom fell out of the shaft, and looking down its straight walls, we saw the purple gleam of phosphorescent vegetation.

I went back to the city to snatch a few hours of sleep, and to exchange my space suit for the topi and light cotton uniform worn in the day. I left a crew excavating recesses about the mouth of the shaft for the hoisting machinery and the mechanism of the great valve. When I returned, the machinery had already been hauled out on tractor-drawn vehicles, and the installation was almost complete. The huge sliding lid was already in place, with a thin shell of rock over it for camouflage, and the motors, cages, and cable-drums were being set up in the space cut out beneath it.

Four hours later a cage dropped down that great shaft, as the winch unwound the steel cable that supported us. I was in it, with father, Gardiner, Tom Dowling, and sixteen other men, equipped with searchlights and D-rays.

A strange and splendid scene it was that burst upon us at the bottom of that half-mile shaft. We emerged into sheer space. Our brilliant searchlights played on an inverted forest of pendant stalactites—a fantastic, topsy-turvy world of glittering, snowy whiteness, dazzling in our intense lights.

The floor of the vast cave was still seven hundred feet below us. A weird thick jungle covered it—rippling with the eerie light of luminescent vegetation. The growth was thick and dense. Great fleshy, fungoid plants rose half a hundred feet high, glowing with pale, uncanny white. Even above them swayed the feathery fronds of fern-like trees, gleaming with viridescent green. Here and there were thickets of low violet growth. The whole floor of the cave was splotched irregularly with patches of fire—white and green and violet, bloody red and shimmering opal and flaming purple.

Almost directly below us was the long black lake I had seen as a child, shimmering with the green and purple of the shining jungle that overhung its silent shores. From it, the flaming jungle sloped up to forests of glittering stalagmites. Beyond the stalagmites the walls of the cavern rose, winding, cragged, frosty with crystalline deposits that scintillated wondrously in the many-colored light of the luminous jungle.

Swiftly the cage dropped at the end of the cable, the cavern opening up about us. Three thousand feet wide, perhaps, the penetrating rays of our searchlights showed it to be. Its length seemed infinite. The white dazzling rays traced its rugged walls until they lost themselves westward in infinite distances.

WE were entering an empire, within the moon! That such a great cavity is possible on the planet is due only to the slight force of its gravity; on earth the rock walls would have become plastic under the enormous weight, "creeping" until the abyss was closed.

As our cage dropped low over a dense forest of entwined, palm-like trees brilliant with soft green flame, a strange winged thing sprang up from the black lake-shore. Black it was, and covered with glistening scales. It had two vast eyes, immense oblong orbs, glowing with intense violet. It bore itself on deliberately flapping, leathery black wings, that must have spread a hundred feet.

One of the men in the cage raised his D-ray tube nervously. Indeed, I felt a momentary thrill of alarm on my own part, for the monstrous creature had come directly toward us. But with a word, Gardiner restrained the man.

And the huge black thing, seemingly dazzled by our battery of blazing searchlights, turned and winged a silent way off down the dark passage to westward, until our thin white rays lost it in a maze of ghostly, glittering passages.

Then, swinging there two hundred feet above the luxuriant luminous jungle, we set to clearing the vegetation away. Fantastic glowing plants melted beneath our vividly brilliant D-rays.

As is well known, the D-ray itself is colorless, since it is a vibration in the ultra-violet spectrum, of a wave-length far shorter than that of visible light. The flaming colors seen in practice are due to secondary radiation, which aids in controlling the ray. The difference in color is due to the variation in atomic structure of the three kindred metals used in generating the ray. The platinum electrode produces a brilliant scarlet beam. When osmium is used, the color is a bright, emerald-green. Iridium generates a vivid orange-yellow ray.

Within two hours we had swept the cave from wall to wall, and for about two miles east and west. Where there had been a weird, luminous jungle, only naked rock and bare black soil was left. Then we landed, and left the cage. Gardiner and I set immediately about surveying the spot on the lake-shore beneath the shaft, for the buildings and yards to be constructed there, while several expeditions were sent up and down the cavern.

The men sent westward reported that the cavern curved about, and stretched back to the east in many tangled passages, wider even than the one in which we were, and all grown up with luminous jungle and swarming with ferocious winged monsters. It was through that region that I must have passed in my escape from the cavern years before, when I had come out in a crater many miles east. I was appalled at the men's description of it.

The men sent in the other direction reported that the cavern extended only a few miles that way. We seemed to be in a relatively small, bottle-necked chamber, with the curved neck of the bottle opening out into vast and unknown space beyond.

As we worked, the cage made repeated trips to the surface for more men and supplies. Soon a dozen flimsy towers had been set up about the lake, with powerful atom-disruptor lights blazing from their tops. The stalactites of the white roof caught the light and reflected it in a brilliant flood.

Father and Tom soon went back to the city, to look after the mines and our supply of raw materials. Gardiner and I stayed in the cavern, to get work started on the new ships as soon as possible. The cage brought us increasing streams of men—engineers and laborers from Theophilus and Colon and from the smaller cities. Quickly we erected barracks in which we slept; and a vast open shed, under which cooking and eating was done. Gardiner and I superintended the work, taking alternate shifts of twelve hours each.

With amazing speed the spidery framework went up, which was to support the keels of the score of new vessels. In a week the cradles along the lake-shore were almost completed, and our quickly erected foundries had patterns for the casting of the first huge plates.

A strange industrial city grew up along the cavern

wall, above the yards. There were furnaces that sent an endless infernal glow upon the hanging roof above, and thundering hammers and rolling mills, and great power plants that hummed with atomotors totalling millions of horsepower. Part of the equipment had been moved in sections from the shops at Firecrest, much more had been built, and other units were always planned, needing but time, men, and money to make them complete.

We had been at work for two weeks, when Gardiner told me that another engineer—his name was Nordeau—I think he came from Colon—was ready to take my place, to give me the time to work out refined plans for the D-rays, with which to arm the new fleet.

I obtained a short leave of absence, and went to spend a day with father and Valence and her family, up at Firecrest—for father had gone back to the city at once.

Before I left Gardiner, I did my best to persuade him that I should be assigned to the new fleet. I wanted desperately to be with it when it went to earth, so that I might have a chance to find Leroda. And I was afraid that Gardiner meant to send me back to Warrington, as soon as the work was well under way.

The old scientist grinned quizzically at my request, and reminded me that it would be a year before the fleet could hope to leave the cavern, even if all went well. He refused to give me any definite promise.

I got out of the cage, and climbed up the short footway to the great valve to the surface. Once more I looked upon the city of my youth. The gleaming walls rose perhaps five miles away, westward. The city was circular and compactly built, many stories high. It was shaped like a great round disc dropped by the rim of the crater—as it gleamed in the bright sunlight, it looked very much like a vast silver coin.

The rich mines, from which had been drawn all the wealth to make this wondrous city, were in the crater beyond, with its grim circular rim rising behind the glistening walls.

AS I stood and looked at Firecrest, a fierce pride in it welled up in me. It was ours. We had made it. When father had come here, this had been bare desert. All this he had built. I had helped; part of it was mine.

In a new topi and white uniform, I hurried across the five miles of bare desert to the city, beneath the blazing noon-day sun. I went at once to father's office, found him at work behind a great desk piled with papers. I saw that he was doing more work than he had tried in years; but his thin shoulders were straight, and his blue eyes bright with enthusiasm.

He was glad as ever to see me. He told me that Jenkins had come and gone, with his inevitable "dispatches from Warrington." And mother had come with him. It had been a hard and perilous trip. The old scout had not wished to bring her; she had been compelled to get an order from Warrington. But she said that the old fellow had cared for her most devotedly.

When father and I went to the apartments, she was triumphant, happy and smiling, as well as ever now, though the fatigue of the trip had left her in bed for a day or two.

When I jokingly scolded her for her hardihood in making the trip, she said, laughing, "I may look like a faded old lady in lavender, John, but I *am* a girl—and I mean to stay one! Do you think I wanted to stay in Theophilus when I had a chance to come to be with all of you?"

Jenkins, it seemed, had not brought good news. An army gathered near Colon under General Hall had marched for New Boston at the beginning of the lunar day, with the object of uniting with Warrington in retaking the city. Hall had been met by a combined force of three space ships and five thousand negroes under Masonby, and a horde of the Selenites called Ossinae, with whom the Tellurians were allied. Hall had been disastrously defeated, retreating with only a fraction of his men. Four thousand dead were left upon the field—upon which, it was said, the moon-calves had made a horrible banquet.

Then Masonby's force of war-fliers, negroes and moon-calves had marched against the little mining center of Kirby Peak. This had fallen after a short but spirited defense. Of the two thousand inhabitants, only a handful had escaped the general massacre. The mining machinery and the store of metals on hand had been largely carried off, and the buildings and shaft houses wrecked with the D-rays from the ships.

Another and larger force, working out of New Boston as a center, had met Warrington in a battle between that city and Theophilus. While the combat had been indecisive, Warrington had lost several thousand men and a good deal of equipment, and had been forced to retire upon the appearance of six ships of Humbolt's fleet.

After a few happy hours with my parents, I went back to our new laboratories in the cavern, to set about the experimental work on the D-rays. Remarkable progress, I found, had been made even in the day of my absence. Some of the new factories were running, turning out mostly the tools with which the ships were to be built.

Weeks went by, weeks of exhausting toil, of slow and painful toil. Slowly my efforts with the D-ray brought forth a military weapon that promised to equal the improved tubes carried on the new Tellurian ships. Slowly the great spherical hulls of the new ships were rising by the lake—though they were yet but hulls, without engines and without weapons.

Warrington, after his defeat, had retired to Theophilus again. Now another day had come and he had advanced again, as Jenkins—the old scout was a frequent visitor now, with his dispatches—had informed us.

I had kept renewing my request to Gardiner for a position on the new fleet. Always he had refused to commit himself. But on this day Jenkins came with dispatches. He brought the news that Warrington had met Humbolt again and had defeated him in a hot battle, winning all he had lost in the previous engagement, and more. The whole moon was rejoicing for the victory.

After Gardiner had read the dispatches and sent Jenkins back with our reports on the progress of the work, he brought me a yellow envelope, addressed to John Adams, Jr., and marked "General Orders." He had always bantered me about my desire to go to earth, with questions about my motive. Now he gravely informed me that I was ordered to return to Theophilus, to resume my place as engineer-attaché.

"Warrington is planning a big coup, in conjunction with Doane's little fleet," he said, solemnly. "He wants you along, to help plan some temporary fortifications."

"Very good, sir," I agreed, saluting and trying to conceal my disappointment. "I had been hoping to be assigned to the fleet."

Thereupon Gardiner broke into roars of laughter. Presently he recovered his composure and whispered in my ear, "As if I didn't know! And I know why you are so anxious! Ha! Ha!"

Dazed and wondering, I opened the envelope for confirmation of his words. I read: "It is my pleasure

to inform you that you are assigned to Lafollette as his military secretary. You will make the voyage to earth with the fleet in order to be able to work with him on the return voyage. You will use your knowledge of conditions on the moon and your engineering skill to aid him in every possible way in his preparations for operations here. B. Gardiner."

As I looked up, too much overcome to speak, and wrung the old scientist's hand in silent thanks, he grinned and said:

"Why not bring her back with you?"

CHAPTER XIX

Treason

ON April 18, 2328, Gardiner and I left the Firecrest cavern for the new capitol of the moon, at Kurrukwarruk. It had been nearly a year since the opening of the great cave. The ships were almost done. On May 1, the sun would rise. That was the time set for departure for the earth. We were to attend a last conference in the hidden city, to perfect the plans for the voyage and for the military operation with which Lafollette might take part on our return.

The cavern was a changed place now. All the great chamber, five miles long, had been cleared, and brightly lit by atomic lights suspended from the glistening stalactites of the roof. It was cut off from the unexplored wilderness of the lower cavern by an impenetrable yellow curtain—an unbroken wall of fan-rays.

There was a new city, of many thousand people, above the fresh-water lake, with fertile gardens of vitamine plants covering the soil where once the luminous forest had stood. The lake-shores hummed with industry, vibrating to the ceaseless throb of machinery—smelters and furnaces, power plants and rolling mills, foundries and machine shops. The reverberation of the mighty hammers that forged the armor plates for the ships vied with the endless rattling clang of the thousand riveting hammers that were fastening them together. And all the activity of the place was drawn from the boundless energy of the atom.

Twenty great ships lay in their cradles about the lake, like vast balls of silver. Already their atomic blast engines were being installed; and the heavy armaments of D-rays, with all the refinements that I had labored so many months upon, were being mounted on the ray-decks. Ten thousand men, from all over the moon, were being trained to man the mighty fleet of space. Two months before, Doane had left the little *Eagle*, to come and relieve Gardiner of his duties as Admiral.

Jenkins had come for Gardiner and me. We left Doane in charge of the fleet, and set out for Kurrukwarruk upon the moon-calves of the old scout. The night had fallen two days before, but in Gardiner's improved space armor, with comfortable freedom of movement and ease in breathing, travel by night was fully as comfortable as in the stinging heat of the lunar day.

Jenkins, as usual, was garrulous, but on this night his talk was mostly of his varied adventures in the last year. He had been almost always on the move, keeping Warrington in touch with us at Firecrest, and with Hall, who was still campaigning out of Colon. Jenkins' talk was almost a history of the war. The moon's fortunes had risen and fallen; there had been enthusiasm and encouragement. Warrington had fought battles that seemed victories, and battles that appeared to be defeats; Humbolt was still trying persistently to widen his territory outside of New Boston. All in all, conditions stood about as they had a year before, except that the moon was learning to depend more and more upon her own resources.

Without accident, we reached the little crater with the hidden city of Kurrukwarruk perched, all but invisible, upon the central peak that rose from a desert of crystalline brilliance, silent and still in the cold pale light of earth.

Warrington was there, having come with one of Jenkins' fellow scouts, Mendoza the Spaniard. There was another agent who had paid a secret visit to the patriots in New Boston; and Vendome and Wong Kow were there, from Hall's forces at Colon.

Most of them seemed glad to see me again—Warrington especially so. We had a great banquet, arranged by Meyers, by way of opening the conference; and afterward the General invited me to his apartments. He pushed maps and dispatches aside and we had a pleasant social evening, spent in talking over our old times together, and in viewing a comic "stereo" talking picture from earth, which had been on the last prize Doane had captured—our intrepid captain of space had brought no less than a dozen of Metals' supply ships back as prizes during the war.

Next morning the conference began. As such things go, it dragged on slowly, with a lot of useless oratory. Warrington and Gardiner, with their years of experience at such things, had rare skill at letting the important delegates gain satisfaction by making dry and high-sounding speeches, and then getting them to do what was needed.

On the second day, the Director of Finance reported that his secretary, Benedict, had vanished mysteriously. He was a little alarmed; he said that certain important papers had been disturbed; he had found an empty film carton in the vault where they were kept, and feared that photographs had been made of them. But in spite of his implications, it was hard for me to upset my faith in the dashing, brilliant young soldier. It seemed incredible that the man who had risked his life so nobly in the storming of the space-port at New Boston could now be engaged in foul play.

But Greenville, the Director of Finance, insisted that Benedict's room be searched at once. It was found in disorder, with all the young secretary's personal belongings gone. It was evident that he had left permanently and hurriedly—and without much care for the traces of departure. A young officer, on going through the waste-paper basket, discovered a crumpled sheet of paper that bore a sketch map of this section of the moon, showing the location of Kurrukwarruk. The many alterations and notes showed that it had been merely a rough sketch for a more accurate map.

Was Benedict a traitor? Was he preparing to betray the location of the capitol?

As much as all was trusted him, it seemed that he was.

Investigation showed that someone had passed through one of the air-locks about twelve hours before. No one had seen him; but Jenkins put on his space suit and went out to interrogate his Selenites, which had been left at the foot of the hill upon which the city stood.

IN an hour the old scout was back. He reported that M'Ob, his favorite young male moon-calf, which, he often boasted, had more sense than a man, had seen a strange Selenite slip into the crater many hours before—the moon-calf's sense of time is so different from that of a human that this point could not be definite. The strange beast, which, according to M'Ob's account, as Jenkins gave it to us, was a huge red female of the tribe of Ossinae, and armed with a long

D-ray tube, had entered the crater from the direction of New Boston, crept to within a mile of the city, and lay there hidden. M'Ob, who had been about the foot of the hill below the city's wall, rambling about in search of bits of lime-stone to eat, had thought of going to accost her, had been deterred by fear of her weapon. He had been ordered to warn the city in case of danger, but the moon-calf psychology is a curious one, and a single creature did not seem a danger to the fortified city, in his eyes. The strange monster had been in hiding for several hours when a man in a space suit, carrying a dark object that M'Ob could not name, had slipped out of the city and reached her hiding place. He had mounted her at once and had been carried off in the direction of New Boston. Such was the story that Jenkins got from M'Ob, for which he rewarded the beast with a package of sugar cubes—upon his promise to take them slowly, and not get drunk.

A little figuring showed us that Benedict, if he had indeed been carried to New Boston, might have reached there three or four hours before our discovery of his absence. If he were really a traitor, and it now seemed that we must admit it, he was likely to send Van Thoren's fleet upon us at once. An attack was likely at any moment.

Meyers set immediately about organizing the defense of his city. There were two thousand troops stationed there, in addition to the five thousand civilian population. Kurrukwarruk had been built like a fortress, armed with batteries of D-rays, atomic vortex projectors, and protecting fan-rays. These were manned by the troops; the citizens had been well trained in stopping leaks in the roof, to prevent the escape of the vital air during bombardment.

For my part, I hurried up to the roof. It was of heavy quartz, with a roof-garden below the most of it. Over streets and open spaces was a lattice of walks, for those who inspected or repaired the endless sheet of glass above.

The city had been darkened, and though the roof was frosted with a film of frozen air, it was still translucent. For perhaps an hour I stood there in the blackness, staring up at the bright greenish disk of the earth, swung in a mist of stars. Below I heard the clangor of machinery and the hum of voices as the city was mobilized. Men were coming up about me—I passed a few words with them in strained monosyllables.

Then the alarm sounded through all the city. The firing of signal guns and the ringing of bells! And a great cry, picked up and repeated until it rolled through the city.

"The war-fliers! Van Thoren is coming!"

I scanned the sky through my compact pocket binoculars. Here and there, against the nebulous star-dust of space, I picked out a little circle of perfect blackness with a weird trail of flame below it—the circle was a Tellurian ship, and the flame the discharge of the atomic blast.

One ship dropped a little below the others, and a winking red light signalled:

"I demand the immediate surrender of Kurrukwarruk, with all rebels and traitors therein. Refusal will mean annihilation. Van Thoren."

I could not see the historic reply that Warrington sent:

"We defy you."

But I did see the winking point of red above reply:

"Traitors, your doom is on your own heads."

The war-flier floated back up again, until it was with the others that floated in slow ominous circles far above, like the vultures of earth above their carron-prey. Then the bombardment began.

Bright, narrow piercing rays stabbed from the floating black sphere toward the city. Huge flaming globes of purple and scarlet, fearfully explosive atomic vortexes, dropped swiftly down. Rays of blinding yellow and flaming red and crystal green shone upon us from those menacing spheres.

And the flash and the splintering burst of shells upon the thick quartz above told that the enemy were using explosive projectiles, none the less terrible because they were invisible in their coming.

But the city was not without defense.

The fearful danger of night attack had been realized long before. The city's roof was dotted with weapons, and every citizen was a part of the well-drilled organization that now rushed to position. In a few minutes a forest of vari-colored rays was rising toward the fleet from the white glass roof that spread far about me; and broad fan-rays, spreading out, intercepted the falling bombs and disintegrated them harmlessly before they struck.

There were a few of the vortex projectors, too. From two or three points about the city, high on the gleaming frost-silvered spires, great flaming globes of scarlet and purple flame, vast balloon-clouds of living light, rose up swiftly in unending succession. And when one of those glistening globes of colored flame struck a ship of space, the fearful blast of disintegrating atoms demolished it utterly.

I heard sounds below. Harsh orders, stern commands, mingling sharply with bursts of cheering and patriotic song, broken sometimes by the sharp crack of an old-fashioned pistol, or by a wild scream of terror.

All the vast vistas of the green garden, with the endless rows of white metal towers that supported the flat, silvered blackness of the roof above, were now brightly lit with the thousand soft silver globes of the atomic light. And all that vast roof was crowded with people, in hurrying little bands.

There were men and women, rich and poor, wearing jewels or clad in rags. All were together now, all equal in the time of terror. I saw fine society women in the motley groups, sometimes under the command of tattered grimy fellows who looked like beggars.

There were a hundred of those hastily organized groups of citizenry upon the roof, with step-ladders, and ray-welders, air-shields, beams and braces, and great lumps and sheets of metal and glass. The weapons were manned by regular troops; the part of the civilians was to detect and repair breaks in the quartz roof, for if the air leaked out faster than pumps and generators could replenish it, we were doomed.

I HAD no more than taken in the scene before me, when there was a sudden blinding flash against the roof fifty yards away. The concussion of the explosion was terrific. Stunned and deafened, I was flung to the floor of the roof-garden, into a tangled mass of vegetation, conscious of a shower of shattered quartz falling upon me.

I sat up uncertainly, rubbing my bruises, at first unable to understand what had happened. Then, in horror, I saw a vast yawning spot of blackness in the silver roof, with the stars shining through it cold and hard. In a moment there was a sighing sound from it, that quickly became a mighty rushing. A breath of cool air met my face, growing to a roaring tempest.

I struggled to my feet, dashed toward the spot, almost helpless in the grasp of that hurricane of escaping air. Already it was freezing, from expansion. A white flurry of snow-flakes was whipped along upon it, and a blue mist had hidden the stars outside. The roof-guards were rushing up from all about, carrying ladders and equipment.

Stunned and deafened, I was flung to the floor of the roof garden, into a tangled mass of vegetation.

I hardly recall the incidents of the next half minute. It was one of mad terror, of fearful effort, of blind, frenzied haste. I have a vague memory of setting up ladders against the wild force of outrushing air, of clambering up them, leashed and half-frozen by the hurricane, struggling with great sheets of metal and glass, toiling madly to get them in place against the prankish, fiendish force of the air.

Then suddenly the awful wind was stopped as suddenly as it had begun. I was standing on top of a ladder, plying the dazzling beam of a welding-ray that was fusing and joining the edges of the sheets we had set up to stop the hole. My hat and coat were gone, a great painful bruise was rising on the back of my head, a little stream of warm blood was running down my face—in fact I was rather cut and bruised all over.

But the damage of the bomb was repaired—all except for the loss of thousands of cubic feet of air. That, we could never replace.

Then there was a little pause, when we could look out through the frosted roof, to watch the terrible splendor of the battle—the war-fliers of the Tellurians, in the weirdly hued clouds of the atomic blast, sometimes black, sometimes blindingly outlined in the glare

of searchlights that played from the towers of the city—the rays, narrow and very bright, like fierce jets of dazzling liquid fire, scarlet and green and yellow, darting sharply and quickly like slender fiery swords of ruby and emerald and topaz, or like striking snakes—and the broad misty spread of the yellow fan-rays that shielded the city or the ships, pale clouds of saffron and orange, like great sheltering wings of a hovering bird—most splendid and terrible of all, the globular atomic vortexes, great balls of liquid flames, blue and purple, crimson and violet, floating up from our weapons like a stream of rising bubbles, or dropping in showers from the ships above, all exploding with fearfully destructive flashes of crashing flame. It was like a display of beautiful pyrotechnics. It was splendid, and terrible beyond expression.

For a little time I watched, as all about me were watching, save for a few who had turned from the fearful glory of the scene to crowd around a dying man—a poor fellow who had been struck down by a fragment of glass from the shattered roof.

Then other projectiles, that somehow had passed the protecting fan-rays, were bursting on the roof. I watched another desperate mob, a few hundred yards away, engaged in such a mad struggle as we had engaged in to repair the roof. Then suddenly a sharply focused D-ray cut a circular hole near us, and again that desperate battle with the angry freezing wind, until the break was repaired. But that time, because we knew how, it was easier.

Again and again, a great yawning opening was torn in the thick quartz roof. We ran from one to another, forgetful of time, person or place. I was cut with fragments of glass, numbed again and again with the fierce chill of expanding air, battered about by the wind, even blistered by an accidental beam from a welding-ray.

And steadily the roof grew colder, as each loss of air chilled it a bit more, and during the rare moments of rest we clustered about the atomic heaters to warm our trembling limbs. And presently I noticed, with a chill of horror, that I could feel the symptoms of the thinning of the air. I was panting as I stood there, and my heart was pounding wildly. And I felt the sticky, cold moisture of blood upon my lip—my nose was bleeding.

When the next breach was made in the roof, many of my fellows staggered and fell as we ran to make repairs. And when at last, after a fearful struggle that demanded the last ounces of our ebbing energy it was done, I saw that many others were suffering from nose-bleed, or lay gasping on the ground. Some, I saw, were already dead.

Again came that familiar glare of yellow flame, that thunderous, splintering crash, that shower of sharp-edged, shattered glass. And then the thin howling of escaping air. I staggered up with a few of the others; we tottered toward that yawning black space in the roof—with the splendor of the dancing, sword-like rays and the floating balls of many-colored flame beyond.

The thin chill air sucked up past us, seemed drawn from us with a pump. I gasped, choked. I felt as if a demon were drawing the air from my lungs. The intense cold gripped me. A thin frost formed over my bleeding limbs. I saw that others were falling about me. I tried to shout a plea for air—and a fearful hand crushed my throat! Blood spurted from my mouth, and I fell freezing on the platform.

Vainly I tried to get up to stop the tempest of air that was howling with a shrill mournful note through the black star-shot hole above. A great wave of cold surged over me, and seemed followed by a vague mist of golden fictitious warmth. My consciousness faded into a vague chaos of surging purple clouds. I floated, now freezing, now feeling a tantalizing hint of warmth, always with awful hands grasping at my throat.

IT seemed a long time before my mind rose out of that black abyss. Then I felt as if I were in a coffin, being carried along. There was something about me, so that my feeble efforts failed to move my limbs. Perhaps, I thought, they were frozen stiff. And I felt a regular swaying motion, as if I were being carried on the back of a man.

Presently I felt warm pads about my body, and heard the thin sizzling of escaping oxygen, and felt a metal valve in front of my mouth that worked as I breathed. With an agonizing effort, I moved. I sat up, and found myself on a sort of litter, easily borne between two grotesque giants of silver metal, with great round heads. And ahead of me were many more strange metallic figures, toiling about some huge machine, dragging it along.

Then my muddled brain cleared somewhat. These fantastic metal giants were men, in silvered air-pressure space suits. I had been put in one. And we were going down a tunnel, probably somewhere below the city, with the men dragging a huge machine ahead of us.

Then a voice rustled in the phones of my hemlet. A queer metallic ring it had, yet I recognized it as Gardiner's.

"Glad to see you coming around, Adams," he said. "You missed the order to get in a space suit, eh? We had a hundred and fifty, enough for all members of the Assembly, and for nearly a hundred men. But how are you doing?"

"Why—well enough," I articulated with an effort.

"Good! Just take it easy. You were pretty badly off when we found you. I imagined you had gone up on the roof, and sent a couple of men up to look for you, when you didn't come for the suit."

"Where are we now?"

"About a thousand feet under Kurrukwarruk. Secret tunnel here. Comes out by the crater rim, about two miles north. Some atomobile there we can get away in. The men are hauling along a big D-ray mining machine. We may get in a shot in the rear."

"Warrington, and Jenkins, are they all right?"

"Thanks, and we sure are," came from just ahead of me in the rusty voice of the old scout. Then I recognized his stocky figure; he was one of those carrying me.

For a few minutes I lay quiescent on the litter, recovering my strength. After a little adjustment of the oxygen feed from the tanks and of one of the atomic heating pads, I felt comfortable enough, though rather weak. Presently the party halted, and I made Jenkins put me on my feet—though I could hardly stand.

We had reached the end of the tunnel. The silver-suited men were hoisting the great D-ray tube to the surface. It was a huge thing, almost unmanageable. The silvered quartz vacuum tube, which held the little disk of platinum which was the actual source of the ray, was twenty feet long and four feet in diameter. Surrounded with coils, secondary tubes, prisms and condensers, it was mounted in gymbals in a heavy metal frame, which also carried the atomotors for energizing and controlling it. It must have weighed twenty tons.

At last it was pushed and hauled up through the tunnel mouth, by the struggling men, sweating and swearing in their silvered armor. Jenkins and Gardiner

lent a hand, even Warrington himself. I was still feeling unable to do more than stand up.

But presently I clambered up beside the mouth of the tunnel, where the men were blocking the great machine in place, and adjusting it for use. The scene was lit by an awful light. A fearful flickering glow shone over the weird, white desert of lava plains and crater walls, from the brilliant rays and spinning, infernally flaming vortexes above the doomed city. The silver ships of the enemy were drifting and circling low above the glass-roofed citadel on the mountain, gleaming terribly in the dreadful splendor of the battle.

It seemed that we looked upon a veritable storm of fire. From a dozen points about the white mountain burst brilliant geysers of scarlet and green and orange flame—thin narrow rays, blindingly bright, that played quickly and ceaselessly against the utter blackness of the sky. And broad yellow fan-rays spread out like wings of saffron dawn, to armor the city. And from each of the vast white spheres circling slowly above—there were seven of them now—jetted hard, bright fingers of bloody ruby light, and of living emerald and of smoky topaz, wavering over the city like tentacles of a living monster.

And the fearful balls of fire, blue and purple and white, the madly spinning spheres of destruction that were the atomic vortexes,* rose and fell ceaselessly, exploding with awful, blinding bursts of flame.

Presently the men passed word that the tube was ready. The captain stood with his hand on the switch; the engineers fussed over the atomotor, the range-finders stood with tripods and instruments set up before them, sighting; the gunners waited by the wheels that trained the great machine.

IN a few moments a great globular ship, in its slow circles over the city, drifted toward us until it could have been hardly two miles away. No yellow fan-ray screened it from our attack—it was not expecting a shot in the rear.

Warrington gave the order. The range-finders, at their telescopes, spoke terse directions. The slender, silvered tube of the great machine swung slowly in its trunnions. The engineers nursed whining atomotors, and purple sparks leapt between the coils.

Then the click of a switch. An intense beam of crimson light—intense, bloody, sparkling—leapt silently from the top of the silver tube. Looking as solid as a jet of ruddy, molten metal, it impinged squarely upon the vast globe of silver above.

The white ship blackened; then its side was lit with a red glow that became quickly incandescent white. The war-flier seemed to stagger beneath the beam that was swiftly dissolving her armor, and fusing her with the generated heat of atomic disruption.

Still our vast silent beam of crimson clung to the war-flier, despite her zigzag rolling in an effort to escape. Had the tube been equipped with the refinements I had lately perfected at Firecrest, we should have been victors already.

"Into the tunnel!" Warrington shouted suddenly. "All except the crew!"

Pell-mell, armored men piled into the open mouth of the passage, raced down it. We were not a moment too soon and were hardly there when a shattering blast came from the tunnel, and a sudden flare of wicked flame.

Fifteen minutes later we groped our way back to the surface, over a bank of fallen débris. Where the tunnel-mouth had been was now a vast crater. Of the D-ray machine and its crew was no sign. But the war-flier lay, a crushed and blackened thing, upon the snow-covered desert a half mile away.

The six remaining ships continued their bombardment of the city as if the fate of their sister vessel had not been noticed. I saw that the rays from the city's crystal towers were fewer now.

We lost no time in advancing upon the fallen vessel—a whispered conference of a few seconds decided the matter. There was considerable peril in it, if the other ships should happen to see us. But they were still well engaged—one of them was caught by a swirling atomic vortex and demolished in a fearful explosion almost as we started.

Our brief discussion showed varied motives for investigating the wreck. The men had thoughts of tobacco, money, new weapons, and of plunder generally. Gardiner and I hoped to get a few scraps of useful information by inspecting the armament and engines of the fallen ship. Warrington said that the flier had been the flagship of the attacking fleet; he hoped that we might be fortunate enough to find its papers undestroyed, that they might contain valuable secrets.

After a few minutes of cautious advance over the silvered plain, the vast metal hull towered above us, twisted and bent by the fall, blackened and fused by the action of our ray. Hiding under the edge of the wrecked monster, it took but a few minutes for us to cut an opening in her plates with pocket D-rays.

A blast of air met us as the rays cut through. It froze in a thin blue fog, and settled in silver frost upon us. We stood back a few moments, until the force of its outrush was spent, and then clambered through the opening. We found ourselves in the lower engine compartment. Scattered about it were the bodies of a dozen men in greasy coveralls. Some of them were still limp and warm—they must have survived the crash, have been asphyxiated when we let out the air.

We found the air-lock that led to the compartment above, and entered it, emerging in the quarters of the crew. There were a score of living men there, but they were unarmed and offered no resistance. From that we went on up to the D-ray deck. The walls of that had been broken, the vacuum of the night already had entered there; and frozen men stood stiff and grotesque about their weapons.

From the ray deck we passed into the compartments occupied by the officers. The walls had held; the men inside were still alive. They were inclined to resist with pocket rays. We lost four men in the brief encounter, and were compelled to kill two Tellurians. But we took seven prisoners, including Masonby, the admiral of the fleet, King, the captain of the ship, and four minor officers.

And the seventh man was Benedict, the traitor. When the others surrendered, he had fled to a stateroom, locked himself in. When we broke the door in, he defended himself desperately with a pocket ray, killing one man and wounding two more in spite of the protection of their space armor. But we took him alive.

He was sullen and silent. His dark face was flushed, and his black eyes smouldered with hate. He stood stiffly at attention, refusing to speak. Warrington had his person searched. Credit units to the value of nearly half a million were found, and his commission as a Director in the Metals Corporation.

"So that is the price of the moon?" Warrington asked him scornfully, waving the documents.

A look of mingled fierce pride and humiliation

*The atomic vortex is generated by a small, solid projectile of platinum, iridium, or osmium, in which progressive atomic disintegration is set up by D-rays of a special frequency, focused with the cathode ray which propels the disintegrating mass. The electronic orbits swiftly widen, but the whole mass is driven along upon the propelling ray until some obstacle upsets the delicate equilibrium, when the atoms break down with an explosion of frightful violence, liberating intra-atomic energy. As is the case with D rays, the brilliant color is a secondary effect, varying with the metal used.

crossed the face of the prisoner. He bit through his lips until blood oozed from his mouth. But he made no reply.

"We shall be compelled to court-martial you, on charge of treason," Warrington said sternly.

"Go ahead—damn you!" Benedict cried in a hoarse voice, spitting blood from his mouth.

Warrington presided at the military trial, with Gardiner and the other officers present as judges. The charge was formally read to the prisoner, the case briefly considered. He made no attempt at defense; he refused to speak except for bitter curses. The penalty demanded was death.

The prisoner heard his doom in silent defiance, with scornful hatred flaming from his eyes. He was commanded to stand against the wall of the wrecked control-room, and complied like a man in a dream. Three men, in bright silver armor, equipped with pocket D-rays, took their places before him.

Suddenly he laughed in bitter scorn, his black eyes flaming.

"You can kill me!" he cried. "But you will meet the same fate. Your hidden cave! Your little fleet! Humbolt knows all about them! When you get to Firecrest, you'll find a wreck! Now kill me—and be damned!"

He closed his mouth, folded his arms, stood there composed, leering in a sort of triumphant hate. I might almost have pitied him if his words had not thrown me into a fever of rage and fear.

"God have mercy on your soul!" intoned the officer. "Fire!"

Three narrow rays, one bloody crimson, one emerald green, one smoky yellow, darted from the pistols of the three silver-armored men. For a brief instant, the dark figure was bathed in blinding incandescence. There was a dull, explosive "plop" and a sudden vivid burst of white flame where he had stood.

And the man who had been false to his world was no more.

CHAPTER XX

Trapped in the Cavern

WE left the ship as soon as our business there was done, and beat a hurried retreat. It seemed that we were not observed—the weird battle above the city was still being hotly fought. Five minutes later we were back in the shadows of the crater's rim.

At the mouth of the tunnel through the crater-wall we stopped to watch. Narrow pencils of jeweled fire were still playing upon the silver ships from the city, and the endless bright streams of atomic vortexes were floating up. But those rays were fewer than they had been; and as we watched, another of the great yellow curtains of the fan-ray vanished as an exploding vortex demolished its projector.

That left half the city exposed to the darting fingers of fire from above. One by one the defending rays snapped out. In a few minutes the city was dark save for the crown of vivid rays that sprang from the highest peak of the mountain. Now all the armament of the five war-fliers was focused upon that one last battery. In another minute, its beams blinked out.

Kurrukwarruk was defenseless.

The surviving vessels of Masonby's fleet made sure of their victory. Their D-rays plowed the defenseless town until nothing but the bare top of the hill remained. Carthage of old was no more completely destroyed when Scipio plowed salt into its ashes. Even the Tellurian ships that had fallen were obliterated—the object being, I suppose, to keep them from falling into our hands.

Then the five great ships rose, and proceeded deliberately in the direction of New Boston.

We entered the great tunnel that pierced the crater wall, and emerged upon the white, desolate desert outside. There remained less than a hundred of us, out of the thousands who had inhabited the capitol of the moon. Jenkins' moon-calves had vanished; we had to leave by atomobile. The network of roads over the moon, in such splendid condition at the beginning of the war, had been so torn up and barricaded that they were hardly more passable than the unimproved desert; and the machine was a poor substitute for the great leaping beasts.

It seemed certain, in view of Benedict's last words, that the catastrophe at Kurrukwarruk would soon be repeated at Firecrest. I cursed the traitor when I thought of mother and father, and of Valence and her little family, when the ruthless fleet should fall upon Firecrest.

A dozen of the machines were waiting in the chamber cut just inside the tunnel-mouth—slender, gleaming silvered tubes, with elaborate springs and tractor tread, driven by atomotors. We started them, ran them out into the bright light of earth. Wonderful mechanisms they were—wonderful they had to be to traverse the wild mountains of the moon. But under present conditions, when the roads were wrecked or barricaded, they were not half so dependable as moon-calves would have been.

Warrington had to go back to his troops at Theophilus. Gardiner went with him. Vendome and Wong Kow were returning, with a party of agents and officers of various ranks, to Hall at Colon. Most of the government officials who had escaped, including Greenville and Meyers, went with Warrington to Theophilus. The troops in space suits were divided about equally between the two parties, to serve as guards in case of accident. The gleaming, cumbrous machines formed two little trains.

To Jenkins and me was left the task of reaching Firecrest, if possible in time to give warning that the city had been betrayed. We had the lightest and swiftest of the atomobiles—a little vehicle, built mostly of an aluminum alloy, and powered to do two hundred miles per hour on a smooth pavement, though we could expect hardly a tenth that speed over the desert. I carried dispatches to Doane. If possible, we were to get the ships out of the cavern before the coming of a hostile fleet bottled them up, and set out for earth.

It was yet some twelve hours until day when we separated, and clattered lumberingly away into the stillness of the frozen lunar night. The heavens were a rich fiery canopy above—a soft silver mist of star-dust, with the incredible hosts of many-colored diamond points blazing hard and cold within it. In the midst of all was the earth—a broad bright disk of greenish blue, vague and misty with continental outlines, and gleaming with wonderful brightness. A strange contrast there was indeed, between the liquid beauty of the earth above us, and the cruelty and suffering its people had brought to the moon. White frost lay over all the cruel wilderness of rocks about us, and upon the dead, crushed vegetation of the day; and the bright earth-light poured upon it in scintillant splendor.

WE were many miles from the lost city of Kurrukwarruk when the rising of the white cone of the zodiacal light foretold the coming of the sun. I was at the wheel of the lumbering atomobile, driving in desperate haste across that frozen white wilderness, beneath the jeweled stars and the radiance of the beau-

tiful earth. As we went, Jenkins anxiously watched the sky, for sight of black circles with plumes of fiery mist below them, that would mean a fleet bound for the city.

What if we should be delayed or lost? What if our machine fell into one of the innumerable abysmal chasms of the moon, and we became a prey to the wild Ka'Larbah?

Such thoughts made me fearful of every black shadow that lay behind the rocks and precipices of that brilliant snowy plain. The sky, all the void above, was marvelously clear. Incredibly black, it was, with thick white stars flaming in it. Far off, to right and left and before us, rose ragged mountains—great, slender, rugged white peaks, far sharper and more cruel than any hills on earth. For all the floods of silver light that fell upon their snow-swept slopes, etching cruel cliffs in black shadow, motionless and distinct, there seemed a singular unreality about them. They were grim, and fearfully cold, and terrible.

The utter loneliness of the night, the knowledge that we were scores of miles from any other human, that no living thing of our own planet could live exposed on the white moonscape about us, the fear of the bottomless chasms masked by the powdery blanket of frozen air and snow, terror of wild moon-calves—all these preyed upon my mind.

Desperately I urged onward the throbbing machine, toward the vast cone of misty golden fire, the solar corona, that crept up so slowly in the east. Jenkins sat intent and watchful beside me—silent, for once. Ice and frozen air slipped and crushed beneath the tracks, but in the vacuum of the night, we heard no sound of it. Sometimes the machine toppled over unseen edges, and fell into powdery drifts. At the rate we traveled over the naked rocks, the riding was unmercifully rough, and we were bruised and tossed about on the padded seat.

Day came at last, when we were midway of a great crater floor. The lurid writhing prominences of the solar corona rose over rugged black mountains, and struck the frozen air with a heat that sent it hissing into murky yellow clouds. We drove on into a mist of glorious fire, flame-yellow before us, blue and smoky behind. Vapor rolled up in thick clouds from the rocks, lit with red and purple flame; and the vast ruddy sun burned relentlessly through it like a red, malevolent eye.

An hour later we came unexpectedly to a "moon-calf road" as the saying is—that is, a path with a leap at the end. In vain I slammed on the brakes. The atomobile slid through a snow-bank and toppled over the brink, to fall for a hundred feet. It was hopelessly wrecked. We toiled with it for hours; but an axle was twisted, the springs were broken, and the motor itself refused to work.

We came to the reluctant conclusion that we should have to go on afoot—although that meant a desperate journey of hardships almost unthinkable. After a last hopeless inspection of the wreck, we turned and attacked the climb from the crevice into which we had crashed.

In a few minutes we won the plain, which was already hot and dry, for the sun had been shining several hours there. Because of the heat, we had to leave the wonderful metal suits, without which life would have been impossible a few hours before.

We had covered hardly half the distance to Firecrest. We had two long days of travel before us, to make it afoot. And already we were exhausted from bouncing about in the machine, and from our feverish efforts to repair it. But we leapt on, driven by fear of a fleet that might be rushing to attack the city.

The red sun blazed down fearfully. We had no proper sun helmets; our heads were protected only with bandages of white rags. Indeed, we wore only the underclothing we had had on beneath the space suit. In a few hours my skin was cooked, and I saw that Jenkins was burning with fiery inflammation, though he did not complain. The worst of it was that we had no shoes—the foot-coverings of the space suit not being detachable. The cruel, sun-heated rocks cut through our socks with the first few leaps, and our blistered, bleeding feet left a mark of crimson for every leap.

That was a double terror. The pain of bare torn feet was all but unendurable. And it was almost certain that a band of the wild moon-calves would come across the trail of blood, and with their passion for animal food run us down.

Sometimes we stopped and bound our lacerated feet with the strips of cloth from our undershirts. But the wrappings were soon torn off, and the sun beat terribly upon our exposed shoulders. Two or three times we found a little unmelted snow lying in the black shadow of a cliff, and crammed handfuls of it into our mouths. But the intense cold of it seemed to sear one's tongue like hot ashes; and a few drops of water failed to slack a burning thirst.

Again and again I looked back over my shoulder, with a thrill of ungovernable terror. And at last my fears were realized. I saw four little black dots back of us, little dark specks that floated up into the air, and drifted back down to the rocky waste of the desert, always nearer.

I stopped, speechless, in a paralysis of fear. I could not speak, but I thrust out a trembling hand. Jenkins saw it, paused, with his red face blanching. From his dry, swollen slips grated a single word:

"Ka'Larbah!"

We hid and watched—cautiously, for the eyes of the Selenites are incredibly keen. I think I screamed when I knew that they were moon-calves, that they were coming down our trail. Then we ran—wildly, madly. It was foolish, for nothing can outrun a Selenite. With desperate efforts I plunged into the air, flew forward, fell and leapt again. It was a terrible death to face. The moon-calves have eaten many men, and the stories told of it are not good to think about.

My breath came in gasps, and my tongue felt vast and hard, like a great roll of dry leather in my mouth. My head felt splitting from the heat. I felt as if I ran over red-hot iron. Presently I found that I could leap no more. On hands and knees I crawled to an overhanging boulder, to wait for the end. Jenkins collapsed beside me, his whole body jerked with the heaving of his breast, and his eyes wild with terror.

The moon-calves were near now. I watched them in a vague apathy of terror. Four or five more hurtling leaps, and then . . . .

ABRUPTLY Jenkins sat up, sobbing with wild hysterical laughter. I stared at him in dull astonishment. A squat little man, he was, and incredibly grimy, his flesh cooked to a raw red. Brick-red tousled hair fell over his blistered face, and ragged bits of red woolen underclothing hung to his burned limbs. And he was doubled up with insane laughter.

Presently I saw that he was trying to speak. The racing moon-calves were almost upon us as he jerked out the words:

"Ka'Larbah! Like hell! It's M'Ob!"

"M'Ob?" I repeated, uncomprehending.

"M'Ob. My M'Ob. My moon-calf. He somehow got away. He followed us."

Indeed, I now recognized something familiar about the vast, red-armored beast, with its three huge green

eyes, as it came to a crashing halt beside us. Jenkins ran down to it, with tears streaming down his red face, he embraced its long tentacular limb, while it fondled his sun-burned body with evident affection.

In a few minutes we were mounted, and racing toward Firecrest at five times our former speed. As we sped, I kept an eager watch on the deep blue sky behind. Terrible hours went by, as we weltered and roasted in the increasing heat of the sun—but our relief was so great that we faced the new hardships without complaint.

Firecrest came at last into sight—a bright silver disk, close against a black crater wall. It was safe!

Then, looking behind, I saw six little spheres of polished silver, scudding toward us, swift and low. The fleet from New Boston!

It was evidently too late to get our ships out to meet the enemy.

I shouted my discovery to Jenkins. He urged our mounts to the limit of their speed, then leaned to me, and shouted:

"We'll go by the cave-mouth. You can drop off there, with the papers. I'll go on to the city, warn them. The beasts must not stop; it would show them where the cave is."

I shouted assent. On we flew. The white balls grew behind us. I saw the familiar boulders about the concealed cavern-entrance. Jenkins shouted and waved his arms to our mounts. They dropped beside the pit, where the great valve was yawning open. I slipped off my mount, with the dispatches belted about me. M'Ob thundered on across the monotonous waste of burned rock, with Jenkins upon him and the other monsters following. They would, I thought, have time to reach the city.

I ran for the valve, leapt down the stair to the engine-rooms, shouting the alarm. I found an idle watchman at the controls of the great sliding lid of the shaft, lounging indolently, in the act of taking a great pinch of wiz-wiz. He stared at me stupidly. In desperation, I seized the levers myself, despite his startled protest, sent the great door shut.

But it must have been too late to hide the shaft-mouth; or more likely, Benedict had revealed its exact location. Five minutes later, I heard the abrupt, shattering crash of an exploding atomic vortex, and the living rock trembled with the violence of a terrific detonation.

Soon the great cage had risen, was carrying me down into the hidden cavern. The fearful concussion of exploding vortexes were crashing continually about the top of the shaft. I was landed at the cavern floor, and sought Doane at once.

A tall man he was, of commanding aspect, with penetrating blue eyes. He listened calmy enough to my brief report of Benedict's treason and of the fall of Kurrukwarruk, and read the dispatches from Warrington. Then he informed me that the last adjustments on the ships had been made, that he had only been awaiting my return, with the final orders, before leaving the cavern.

Now, with the fleet above, it was hopeless to attempt to get out.

In answer to my eager inquiries, Doane told me that father and mother, and Valence and her family, were all in the city by the crater—I had been hoping unreasonably that they would be in the safety of the cave.

"The city is fortified," Doane attempted to console me. "The fleet can be held off for a time, at least."

"But in the end, it will be like Kurrukwarruk—wiped out utterly," I said bitterly. "And we must sit here, idle. There is nothing we can do!"

"Nothing that I see," Doane agreed. "Though our twenty new ships could sweep them down in five minutes, if we could get at them. As it is, we'd better try to block up the shaft. If they find the valve and cut it out with their rays, there'll be hell coming down."

He hurried out, to give orders, and left me standing alone in his little office. I walked to the door, and looked out into the vast cavern. All about me was a modern industrial city, very new and rather ugly, with towering smoke-stacks, and huge naked machines, and long iron sheds. Above was the white roof of glistening stalactites, bright with a million flashing atolights. To the west was a village of bright little cottages, with green gardens about them. And eastward lay the vast unknown regions of the cavern, cut off from us by the saffron screens of the fan-rays.

The sight gave me an idea. Once before I had been in that great cave, in need of an exit—when I had found the place, as child of twelve. I had but the vaguest idea of my terrified wanderings in the cavern. But I knew that I had come out in the bottom of a little crater, about fifteen miles due east of Firecrest. I was sure that I had gone through no passage too small for a wall-flier.

Presently Doane came back.

"I'm having a great steel plate forged," he said, "the size of the shaft. We'll fasten it about midway up, and plant charges above to shatter the walls and bring them down upon it. We'll have something that will take days to cut through, anyhow."

"I think we can leave the cave," I said.

"If we came up that shaft," he objected, "we'd find their rays already focused on us, and no fan-rays to protect us. They would get us one at a time, easy as smashing bottles."

"I don't mean that. There's another way out of the cave."

"Another way?"

"About fifteen miles east of here. We ought to be able to find it, with all our searchlights and navigation apparatus." He listened intently as I related my childhood adventure.

"We'll try," he said briefly.

The crews were already aboard the score of vast silver ships that lay in their cradles along the shore of the black lake. Doane called his orderlies and gave a hurried string of directions. Ten minutes later we were on his mighty flagship, the *Comet*.

WE rose, with the rest of the immense vessels floating up behind us upon their misty atomic blasts. The yellow barriers of the fan-rays dropped before us, and we passed into the mysterious luminosity of the unexplored cavern.

Ours was indeed a fantastic cruise, through a weird hidden world. We sailed swiftly over luminous jungles for four or five miles down the main cavern, our searchlights flashing on glistening white vaults above us. Then the cyclopean cave divided before us like the arms of a Y. We followed first up the right arm. That brought us, beyond some miles of weird green jungle, to a great lake, filling the cavern for many miles. It was alight, looking like a sea of red fire—there must have been luminous organisms of some kind in the water.

I knew that I had passed no such thing during my days of desperate and terrified wandering in the cavern as a boy. I had Doane return to the fork and try the other passage. The glistening crystal roof lowered upon us, and we swept low over an eldritch jungle of phosphorescent green and white and red—with the titanic silver spheres strung out in a long train behind us, alight with the blaze of searchlights and the weird

flame of the atomic blast. The cavern fairly swarmed with gigantic black reptillian things, with wingspread of a hundred feet, their vast eyes burning, luminous, purple, malevolent.

A swarm of them surrounded our ship, which was somewhat in the lead. Scores of them circled close about, screaming with cries that rang dreadfully against the low roof and the narrowing walls of the cave. Their hooked claws seemed formidable enough to rip up metal plates. I became so excited that I eagerly importuned Doane to fire—he was standing with the other officers, searching the glittering roof above through the telescope of the bridge-room.

His look, though smiling, reminded me that he was admiral and I a mere passenger. "Very good, Adams," was all he said. I returned to the window, and stared with bated breath at the immense winged things, in the glistening armor of black scales, that were flying around us.

A few moments later one of them plunged directly at the ship. Its purple eyes glazed terribly; it showed a long jaw filled with teeth that looked capable of chewing up steel ingots. Involuntarily I drew back from the window, tensing my muscles for catastrophe.

But a thin beam of rich golden light jetted suddenly from the D-ray port just below me. Instantly the black monster was outlined in brilliant incandescence. Then it was falling in burned and smoking death. I realized that Doane had given the ray men orders to bring down any of the things that came too near.

Hours more went by. We passed into higher regions—at one time we had been ten miles below the surface. We left luminous forest and winged monster behind, and groped a way through midnight rifts where the searchlights pierced blackness that had not been broken for a million years. We felt a way through narrow winding passages.

But for our marvelous navigating instruments, we should have been utterly lost. As it was, Bris mapped the cavern as we went, and kept the position of each ship located on the map. The vessels were in radio communication, and each sent its discoveries to be recorded on the map. We wormed a way through endless caverns, frequently forced because of a narrow passage to turn and retrace a path, but always penetrating nearer to the spot that I had marked on a photographic view or map of the surface, as the crater with the opening in its bottom.

At last we reached a slanting upward shaft, and gazed up to see a patch of blue-black sky, with three bright stars gleaming in it. Doane sent out a call to the other vessels, and soon they were gathered in a long line of silver spheres behind us in the cavern.

We pushed forward steadily, but with caution, sometimes pausing to smooth a projecting ledge of rock with a D-ray, for the passage had become perilously narrow. We emerged at last in the bottom of a tiny, high-walled crater, shimmering in the glare of the white sun that blazed above the cruel and lofty peaks.

One by one the immense silver globes came out in flashing splendor to meet the day. In a few minutes our whole fleet was floating in close formation in the crater. As we waited for the other ships, Doane had been sunk in intense thought over the instrument board, carefully tracing a cabalistic design on the back of an old letter—he had an odd habit of drawing weird and meaningless diagrams while lost in concentration.

When the last ship drove up out of the crevice, he gave the order, and the fleet rose with the *Comet* in the lead. As we mounted above the cragged crater rims, I pressed my face toward the quartz port in the west, fearful that I would see Firecrest such a desolate smoking wreck as Kurrukwarruk had been.

But I saw that the city still held out. It gleamed in the sun like a bright disk of silver by the crater rim, with the scintillant D-ray still flashing up as if from living jewels set in it. Three of the enemy ships hung above the city, raining D-rays and atomic vortexes upon the sheltering saffron fan-rays. The other three ships were nearer, evidently bombarding the shaft.

We bore down upon the ships above the shaft at rocket speed. They must have quickly seen us, for the rain of flaming vortexes and the shifting shower of rays suddenly stopped. The three war-fliers lifted a little, and drew together, between us and the city. And the fliers bombarding that place redoubled their fire. Serious damage, I saw, had already been done to the glistening towers and domes of Firecrest.

Doane threw his fleet out to either side as we flew. The silver fliers took up a crescent formation; and when we closed in the horns of the crescent folded about the three enemy ships. They waited, hanging over the shaft, until Doane released his first broadside of atomic vortexes, followed by a glancing volley of rays.

Then they darted quickly upward, replying so heavily that they seemed veritable balls of flame, silver globes encrusted thick with scintillant gems that shot deadly

rays. I can hardly explain their maneuver, unless they discounted our strength and expected to find our ships manned with raw recruits and an easy prey to their well-focussed onslaught.

But Doane had seen that his men were thoroughly trained. The three Tellurian fliers found themselves helpless in the center of a deadly ring of fire. In a few seconds our dazzling rays were cutting through their screen. They made a desperate effort to break away, but too late. One of them was suddenly alight with vivid incandescence, and falling crazily. In a moment the two others followed.

At that, the three ships above the half-ruined city turned and raced away. Doane ordered instant pursuit. In a few moments the weirdly rugged lunar wildness of jagged mountain and abysmal chasm and cragged circular crater was flashing beneath us. The other vessels might have escaped if it had not been for the greater power of the new gold atomic blast generators that powered our fleet. As it was, we overhauled them before they had covered a hundred miles. Orange fan-rays spread behind the fleeing argent flyers, and hard, narrow rays burned viciously through in our direction. But soon the racing wings of our fleet were creeping up upon their flanks, and our vastly larger armament brought them down one by one. They fell in twisted masses of flowing ruin, to be smashed and torn beyond recognition as machines, when they crashed upon the cragged lunar mountains.

An hour later we dropped before the walls of Firecrest. The once trim glass armor was shattered, blackened and crumbling from the bombardment. But busy crews were already repairing it. With a few of the officers who had had friends or relatives in the city, I hurried in through the airlock.

An eager crowd was waiting for us, clamorous with hysterical joy. Jenkins bustled out to greet me, strutting in a new red tunic, grinning and very glad to see me. I found father, with a weary look beneath his happy smile, with mother leaning on his arm. She was laughing with joy as I took her in my arms, but I saw the dry stain of tears upon her cheeks.

Before we left the ship we had received the order from Admiral Doane, "We start for earth in four hours. Be aboard at 14:35."

CHAPTER XXI

Lafollette

THE hours seemed but moments until it was time to go aboard the *Comet* again. The whole population of the city, still in a frenzy of hysterical gaiety, turned out in a clamoring throng to bid farewell to the fleet that had saved them. I saw, however, busy crews at work, repairing shattered walls and turrets; and another gang was busy with D-rays, opening the obstructed shaft to the great cavern.

Jenkins, though his equilibrium was a bit unstable as a result of his part in the celebration, was on hand to wish me a good voyage. He became eloquent, and even tearful, at our parting.

Valence and Tom Dowling were out to see me off, Tom a tall, tanned, clean young fellow, who looked rather odd with a soft pink baby on his lean, bronzed arm.

Father gripped my hand crushingly; then broke down his calm reserve so far as to throw his arms impulsively about my shoulders. Mother, as always in parting, was brave. She tried to hide her tears, to appear cheerful and smiling. Her last word was a gay little jest, though her voice broke with an involuntary sob.

I left them, hurried through the lines of soldiers that were guarding the vessels. An elevator whisked

I think I screamed when I knew that they were moon-calves, that they were coming down our trail. Then we ran—wildly, madly. It was foolish, for nothing can outrun a Selenite adapted by nature for fast travel on the rocky surface of the moon.

me up into the gigantic silvered bulk of our flagship, the *Comet*. A few minutes later I stood on the bridge, a licensed passenger, watching the bright silver circle that was Firecrest dwindle and vanish in the rugged gray panorama of crater and plain that was swiftly contracting to a huge mottled golden sphere behind us.

We rose at almost the limit of our power. Soon the moon was but a huge ball below us, with every sharp, jagged line of her mountains distinct in the merciless light of the sun that blazed upon her. And beside the dazzling whiteness of the moon, the sky was utterly black, and dusted with diamond stars.

I went to another window, and saw the earth ahead of us, a pale soft sphere of misty green, with a crescent rim of white brilliancy, and its dark limb outlined in pale rosy light. First it seemed above me, and then my senses swung about oddly, and it appeared to be above. I thought of the girl who was waiting for me somewhere on that vast sphere ahead; and I left the bridge and went to my stateroom where I could play again the vocal record she had given me.

I heard her clear sweet words again, "I will be waiting. . . . My radio-recorder will be tuned always on 5.678 meters. If you ever come, call that and tell me where I can come to you. . . . You know that I love you—forever. Leroda."

Oddly, her words, with the ringing sincerity of their intonation, and the little catches in their utterance that revealed tragic despair, reduced me to the point of tears.

Our passage to earth was made in record-breaking time. With the new projector, we were able to accelerate in a few hours to the limit of speed considered safe in the meteorite-scattered lanes. And with our greater braking power, and more responsive controls, the vessels could be checked or maneuvered more easily, to avoid meteoric collision, and we were able to exceed the usual speed. We started on May 5; and on the night of May 21, we entered the atmosphere of the earth.

I enjoyed my association with Paul Doane during the voyage. The mind behind his piercing blue eyes was as active as his tall and athletic body. As we sat at table I reveled in his cutting wit, and often he found time to join me for a game of chess, for an animated discussion of the latest drama from earth, or of some principle of philosophy or even in a scientific speculation as to the future of the race—he was almost catholic in his breadth of understanding.

But he was not idle during the voyage. Besides the regular duties of Admiral, he took it upon himself to see that the D-ray crews had regular training; he spent a good deal of time writing a monograph on the complicated three-dimensional tactics of space warfare, and he spent long hours with me in working out the scheme for getting Lafollette and his supplies and men aboard the fleet.

At last we agreed that the main fleet should approach the earth over the North Pole and land in north Greenland. The *Comet* would leave the fleet and descend just after dusk on the middle of Lake Michigan. Bris and I would be dropped, in a swift hydroplane, and the *Comet* would rejoin the fleet. Bris and I were to attempt to reach Chicago and get in touch with Lafollette. When we had made the arrangements with him, we were to communicate with Doane by radio, telling him when to return.

We entered the conic shadow of the earth fifteen thousand miles above it, thereby escaping the danger that the glancing reflection of the sun upon our silvered vessels would be noticed by terrestrial observatories. At an altitude of five hundred miles we separated; the rest of the fleet vanished in the northward sky, and the *Comet* sank into the planet's murky atmosphere

Bris and I were landed in our little speed-boat without accident, though we were at first almost helpless under the powerful gravitational pull of earth. We started the atomic engine, and soon were darting away from the colossal silver hull that rode so lightly upon the waves. In a moment it had risen behind us, vanishing in a pall of unfamiliar gray clouds that shut out the moonlight.

IN half an hour the bright misty glow of a million lights was bursting through the haze before us. As we neared the shore a floating craft passed us. Her wide decks were ablaze with light, and we heard swift throbbing music from her. Other bright lights darted through the clouds above, but we were not molested.

Without accident, we reached the shore. We first approached a brilliantly lit garden, with gay festal crowds moving through it, thronging amusement machines in a blinding glare of light, while harsh music glared and stentorian loudspeakers thundered out advertising slogans. We ran up the beach for half a dozen miles, to a quieter place, where there were dark, silent warehouses, and landed.

Bris opened the sea-cock in the little boat, and headed it out again into the lake, under power. We would not need it again.

In an hour we were lost in the gay, restless crowds of the amusement beach. We entered a colossal, glass armored building, slender and tall as a lunar peak, that towered up in a blaze of electric fire. We mounted an elevator to the flying stages above the roof, and there took a private plane to the Chicago offices of Tranco.

Lafollette, we soon learned, was in the great building—he had a suite of rooms there. At first the secretaries refused to call him up. By means of a generous bribe, I got in telephone communication with him. A word was enough. In a few minutes we were received as honored guests in his private rooms.

It was the first time I had met that great friend of the moon-people. He was only of medium height, but there was something of impressive dignity about him. Immaculately dressed, he looked the cultured aristocrat that he was. The quiet richness of his rooms revealed unostentatious good-breeding.

He welcomed us most cordially, with a quiet sincerity. He inquired eagerly after Warrington and Gardiner, who were old friends of his. His eyes snapped with indignation when he heard of the destruction of Kurrukwarruk, gleamed with satisfaction when we told of the crushing of Masonby's fleet.

"And now the moon has a fleet, and she is ready to accept the aid I promised Gardiner?" he asked us frankly when our messages were delivered.

"She is," I said. "I am commissioned to be your secretary."

"Good," he smiled. "We can begin gathering my force in the morning. I'm sure your services will prove valuable, for I've never been to the moon; and I trust you'll find me an easy master."

It was late when we retired to the excellent rooms he provided, and by that time I felt much better acquainted with the polished gentleman who bore so sincere a friendship for the moon and for liberty.

The next day I arranged for the use of a long-range radio set that Lafollette had privately installed in the building—I could not use the public ethero-phone, of course. I sent two short messages, which were to mean nothing except to their proper recipients, and to which no answers were expected.

The one to Doane ran simply:

"On the lake. May 26."

And on 5.678 meters I sent this call:

"Tranco Building. Chicago. John Adams."

During that day, I fear, I was of little assistance to Lafollette in his secret collection of armed troops and supplies of war. I spent most of the time on the stage at the top of the building, scanning eagerly the faces of the endless lines of passengers that disembarked from the incoming aero-liners.

The sun went down, tawny and red in the saffron west, and dusk settled upon the stark buildings, lighted by the pale flood of silver moonlight, and by the dazzling gleam of man-made day upon the busy ways and amusement places. A few stars shone feebly through the hazy gray sky that is so strange to the visitors from the moon.

Until late in the night I waited on the platform, feeling new hope when each bright light glided down from the sky, and falling anew into the pit of despair, when each great liner rushed up and away without having landed the dear girl I awaited.

And she did not come.

The next day I was busy, and could not meet the liners. I spent the time in conferences with Lafollette's lieutentants, discussing conditions on the moon, the present state of political affairs, the military tactics which Warrington and Humbolt had found most effective, the supplies and equipment that an army would need for effective operations.

Lafollette was proving no mean ally. He was undertaking to collect and arm a force of forty thousand men, which was about as many as our fleet could carry. In addition to the equipment and supplies that his own troops would require, he was gathering immense amounts of certain chemical and raw materials badly needed on the moon, which could be obtained only by importations from the earth—petroleum, rubber, etc. He had ready a hundred new D-ray tubes, of the latest design, which would prove a great asset for field operations, since they were mounted on light atomotored tanks.

That evening, Leroda had still not come. I broadcast both my brief messages again, on the chance that they had not been picked up. We had been on earth two days, and it lacked but three of the time set to embark for the moon again.

Next day we were very busy. Supplies were coming in, being stored in warehouses along the lake-shore, many miles above the busy pleasure and commercial sections of the city. There it seemed that we had a fair chance to embark at night, without discovery. And if we were discovered, as Lafollette said, we could fight on earth as well as on the moon.

The troops had been mostly collected, and were quartered in immense apartment buildings a few miles down the water-front. We secured a number of motor boats for ferrying men and freight out to the fleet.

After our work was done on the third day, I went back to the landing stage on the roof, and met each liner that came in until long past midnight. A great dread was beginning to seize me. If Leroda had heard my first call, she had had time to come half way around the world to meet me. That night, after I had gone down to my room in Lafollette's palatial suite, I tossed sleepless with the fear that something had happened. She might have fallen victim to the implacable spies of Metals in the year since I had left the earth. Or she might have met some accident—I was the victim of a thousand gloomy speculations.

On the next day I sent the call again over the private radio. At the risk of inviting the attention of Metals agents, I made it a little more definite.

"Leroda, I am waiting. Tranco Building, Chicago. John Adams."

ON the fourth day I was busy with Lafollette and Bris, going over the lists of cargo, and planning the loading of it. That day, and the night, and the next day passed like an age to me—part of our preparations had to be made under cover of darkness, and we worked all night. But paradoxically, on the end of the last day, the yellow sun seemed to plunge with fatal speed toward the rim of the pale sky. It set. Dusk fell.

Lafollette, Bris and I, and some of the officers, ate a last hasty meal in the great dining hall in Tranco Building. Lafollette gave last instructions to the secretaries and vice-presidents who were to care for his interests while he was away. We took the elevator and were shot up to the roof stage, where the private flier waited to take us down to the old docks, where our force was gathered.

While the others were getting aboard, I ran to make a last inquiry, found that the through liner from San Francisco was due in five minutes. It was a last chance. With good-natured witticisms, Bris and Lafollette granted my eager request to wait for it. My heart drummed loud in my ears when at last I saw the bright lights of the ship cutting through the yellow haze of the westward evening sky. I think a guard held me by the arm to keep me off the platform until the long silver liner had come to rest.

Then my heart gave a glad leap, and I trembled with incredulous joy. For Leroda was the first to step out of the slender steel hull. Eagerly, she came running across to meet me. I leapt toward her, seized her arms and scanned her dear familiar face. The lines on it showed fatigue and worry. But her dark eyes were alight with a great gladness.

Ignoring the noisy crowd and the busy attendants, I took her in my arms. Time passed in oblivion until Bris was by my side, suggesting that we come aboard the flier, so that we could be off.

"Sorry it took me so long," Leroda said. "I was in Hong Kong. I took the first aero-liner after I heard you. We ran into a frightful storm, a typhoon, out in mid-ocean. A freak wind, that had not been recorded by the Meteorological Service. Motors were overstrained in pulling out of it. They burned out, and we came down at sea. Had to wait hours for a slow surface boat to find us and tow us to Hawaii."

By that time we were seated side by side in the flier. I glided swiftly forward across the bright stage, and shot into the dusk. Northward we sped through the gathering darkness, with the splendid towers of fire that were gigantic buildings drifting past beneath us. As we went, the lights grew dim, scattered, gave way to a sheet of darkness.

Then we had landed by a dark lake-shore. Scores of men in uniform were bustling nervously about, and great piles of crates and boxes were stacked up above the water. By the old piers, which probably had not been used for a century, were long rows of boats, loaded and covered with white tarpaulins, with alert men waiting at the wheels.

An hour went by, with men hurrying about, loading boxes and heavy sacks on trucks, and unloading them again. It all was confusion to me, and it was all in the vague twilight—a half-light that seems very strange to one from the moon, where it is always either blazing day or Stygian night. There was an undercurrent of strained suspense in the air.

What if Doane did not come?

He had not answered the message giving him the date, had not been expected to do so, for that might have betrayed his position. Nothing had been heard from him since he dropped Bris and me on the lake.

But that hour passed pleasantly enough for me. I sat with Leroda in the flier, listened to her vivacious

account of how she had spent the last year, told her something of my recent adventures on the moon.

I was overjoyed to find her ready enough to go with me to the moon, in the face of all the perils of the journey, and in spite of the fact that life on the moon was a very uncertain proposition, until the war had ended favorably.

It had been dark an hour when one of the boats that had been out scouting on the lake returned with the welcome news that twenty vast globular ships were floating up toward the shore, upon the still water.

Then it fell to my lot to go out with a signal light, and establish communication with Doane. Leroda valiantly insisted upon going along in the motor boat instead of waiting on the shore, and I yielded. We were five or six miles out when my cautious signals were answered.

Five minutes later the massive bulk of the *Comet* was shutting off the pale stars before us. Guided by my flickering electric torch, the gigantic ship glided up before us, and I ran our little boat under the air-lock. The elevator cage was let down in the gloom. I assisted Leroda to it, and scrambled on.

A few words to Doane, when we had been shot to the bridge, outlined the situation. He gave orders that sent the fleet drifting to within a thousand yards of the shore, to lie there with muffled riding lights until Lafollette's men and supplies could be carried aboard.

He received Leroda most chivalrously—then offered, with a grin, in his capacity as captain to marry us for nothing. But we had decided to let that wait until the end of the war.

Soon the long line of ships was in position, and the regular stream of men and supplies was coming across the black water from the old docks. Another three hours, and the work was done. Lafollette had come aboard, to be received as an honored guest; and the fleet was floating out, low over the dark lake.

Doane gave an order; signals flashed from flier to flier. The pale fire of the atomic blast jetted fiercely from the repulsion tubes, driving us out into space and toward the moon again.

CHAPTER XXII

When the *Comet* Fell

THE voyage back to the moon was a wonderful time to me. Never before, except for that too-brief period at New York, had I been much in the company of Leroda. Sometimes a space flier is a dull prison, of frightful monotony. But that wonderful girl transformed the *Comet* for me, into a paradise, a radiant garden of wonder.

We strolled the ray-tube decks together, hand in hand, and found secluded corners in the vessel where we could sit together for hours, unmolested. We spent endless periods in the bridge-room, watching the ancient but never-aging wonders of the silver star-clouds, suspended in infinite space. We talked; we saw "stereo" pictures; we read poetry and romance. But the most precious moments were those rare ones, when we stood drinking in each other with the senses, almost one instead of two.

Leroda told me the story of her life. It was far from a happy one. Her father had been killed when she was a baby. Her mother had been hounded about the earth for the secret that had led to her father's death. She had been spirited away when Leroda was twelve years old—to die in a secret prison. The girl had lived her life in terror.

But sorrow and fear had not spoiled a sunny, cheerful nature. Now we looked forward to a life that would bring her all the happiness she had missed. We dreamed together of the home we should have. Sometimes she sang to me, her marvelous low rich voice vibrating with measureless yearning, borne out of sorrow on golden wings of hope.

We were by no means to ourselves all the time. With Lafollette and his group of brilliant young officers from earth aboard, things could hardly be dull—though some of them were not such experienced voyagers of space as Leroda and myself, and suffered considerably from space-sickness. There were banquets and balls and amateur theatricals.

Of course the serious plans for the conduct of the war were going forward steadily. Every day I met with Lafollette and Doane and a few of the other officers for a conference that took several hours. Lafollette was full of suggestions, and by the time we reached the moon, a tentative plan of action was quite worked out.

We planned to divide Lafollette's men for the time being, sending about half of them to Colon and half to Theophilus, one contingent being placed under command of his associate, Langley.

We reached the moon without accident, after a passage of only fifteen days.

It was about noon of the lunar day when we landed. The sun fell in a white flood upon the jagged lunar wilderness. We came down at Firecrest. I had been a little afraid the city would be attacked in our absence; but the silver disk of it lay by the dark crater-rim, bright as a new coin.

Doane brought the fleet down on the level plain just before the main airlocks. The men, who had been crowded in the transports for two long weeks, under rather unpleasant conditions, were now fitted out with sun-helmets and white uniforms, and marched out of the ships for a bit of exercise and to become accustomed to lunar conditions of gravitation and barometric pressure. They were deployed about the burning desert for a bit, and then permitted to visit the city, where the inhabitants gave them an enthusiastic ovation. There had been, of course, many cases of space-sickness; but the medical corps had cared for them efficiently, and the morale of the troops had been kept surprisingly fine.

With Leroda at my side, I got off the *Comet* as soon as possible, and hurried through the airlock and up to father's office. Since she had lived on the moon before, the bright girl manifested no inconvenience from lunar conditions. And attired in neat white garments, with her dark locks drawn up under a snowy topi, she looked the very picture of exultant health and spirits.

We found father in the same spacious, bright room where I had spent years at work, with the familiar broad rich desks, and fine familiar rugs, the same curios on the walls—strange things from the far places of the moon—and the same atomic heater, contrived to imitate an old-fashioned fireplace of earth, irradiating the great room with a ruddy glow.

Father stood by a broad window, looking out upon the vast bowl of the crater, with its scattered shaft-houses—now as neat and gleaming as ever, for hardly a trace of the bombardment was left about the whole city. A little stooped, my father was, with a wealth of silver hair. His face was a little more care-drawn than when I had last seen him; but his smile of joy, when his keen eyes perceived me, transfixed it with a luminosity of love.

He came to meet us—with the same quick step he had always had—and crushed my hand in his. I introduced Leroda, and the warm, genial sincerity of his welcome made the motherless girl feel at home at once.

Then we went to find mother, in the living-rooms in the glass-armored tower above, overlooking the mines in the crater and all the country about—the same old rooms I knew so well.

My mother was sitting in the mellow flood of sunlight that streamed through the great windows, sewing, I think. A white-haired lady in lavender, slight and frail as always, but bright of eye and strong of spirit. She sprang up and embraced me with a glad little cry.

Then I presented Leroda. Mother looked at her keenly for the merest instant, then smiled and took her in her arms. As Leroda afterward told me, she found my parents "most delightful people."

Presently Valence came running in, a pretty young matron, with little Tommy with her. She gave me a warm and sincere embrace, and received Leroda with sisterly cordiality.

We had dinner in the same long, bright dining room—it was painful to me to see the walls had been newly decorated. Dinner from the same familiar beautiful dishes, with blue-birds on the rims—they had been used on festive occasion ever since I first remember.

Then I left Leroda with Valence and my mother, and went down to see about my duties. Jenkins had been waiting, with the usual "dispatches from Warrington, sir." I learned that Firecrest was the new capitol of the moon, since the destruction of Kurrukwarruk. At considerable cost in labor, a small tunnel had been sunk from the city to the end of the great cavern, to provide an avenue of underground escape, in case the city above the surface were to be beleaguered again. The Assembly had moved to Firecrest, and most of the executive officers of the new government were there. After our arrival, a series of conferences were held, to further acquaint Lafollette and his officers with conditions on the moon, and to make definite plans for the coming campaigns.

AFTER the troops had rested two days at Firecrest, they embarked again, upon nineteen of the vessels, which were divided into two fleets. Nine ships carried Langley and his men to Colon, the great city by the Appenines, where they could drill with Hall's forces. The ten other ships carried the remainder of the men and supplies to Warrington, at Theophilus.

Our flagship, the *Comet*, remained at Firecrest, in case of a surprise attack from space. The conference was still in session, and Lafollette, Doane, Greenville, and my father were deep in the new plans. Gardiner, who was still with Warrington at the crater city, was to return with Bris, who commanded the ships sent to Theophilus, to lend his support to the conference.

Plans were under way for "forging an iron ring about New Boston"—as one eloquent young speaker put it. Lafollette's and Warrington's forces were to close in upon Humbolt, while Doane met Van Thoren's fleet in a decisive engagement.

Leroda had a genius for getting into the thick of things. She attended the assembly meetings, and soon knew most of the delegates. She set out to devise a "seal" or flag for the moon. She made a model—the design was a white crescent, with "the old moon in its arms"—and had me present the idea to all the delegates I met.

Naturally, with so many young officers from earth about, the social life of the little town was rather feverishly gay. Leroda and I were together at a good many affairs, and had more pleasure in staying away from others.

It was about that time that the "Eldorado Massacre" took place. It was not an important incident in itself, perhaps. But it had vast consequences in increasing the ardor of Lafollette's men, and in steeling the determination of all of us upon the moon. The near-catastrophe to so many important men, that came as a result of it, only impressed it more strongly upon the minds of the people.

The two fleets had been gone for some time, the *Comet* being the only war-flier left at Firecrest. The appeal came from Eldorado, a small mining settlement nearly two hundred miles east of the capitol. The call came by radio; and the interference of the sun's direct rays, which make radio communication impossible during the middle of the lunar days, made it almost incoherent, though the sun had now slanted far toward the west.

Since the moon has no "Heaviside layer" to keep the waves reflected back to the surface, the extreme range of a radio set on the moon is little over two-hundred miles, under the best conditions.

"Ka'Larbah are . . ." it ran. "Ka'Larbah . . . million moon-calves . . . marching. West. D-rays . . . men with them . . . space suits . . . war-fliers above. Aid. For the sake of . . ."

It seemed incredible to Lafollette and his officers that Metals would descend to alliance with the wild moon-calves; but there had been stories since the beginning of the war of a pillaging, massacring band of the Ka'Larbach, officered by men in space suits, and aided by a few ships from Van Thoren's fleet. But until this time no important places had been attacked, and many even on the moon thought the force largely myth. But the disjointed call made it plain enough that such a dreadful army had fallen upon Eldorado.

Though there was but one ship available, and that had been left to defend the capitol, Lafollette demanded that we go to the rescue at once. Doane was not unwilling to set out. After Lafollette's fiery appeal, the Assembly voted permission for the *Comet* to go. In an hour after the call had come, we were aboard and rising.

Doane was in command, of course, and Lafollette and two or three of his officers, insisting that they were on the moon to learn the art of war as soon as possible, were aboard as passengers. I came as secretary to Lafollette.

Another half hour found us in sight of the ill-fated little city. It lay beyond the mountains, on a dark desert plain, like a bright square of silver foil. And all the plain about it was encrimsoned with the glittering red forms of gigantic Selenites. Colossal red-scaled monsters leapt about like giant fleas, obviously obeying the silver-armored men mounted upon a few of their leaders. Many of the creatures carried long, slender D-ray tubes.

As we came in view a little group of men was making a desperate attempt to reach the city walls. Watching through a pair of binoculars, I saw the pitiful struggle of the poor fellows. There were only a dozen or so of them, in ragged working clothing; they must have been miners from some outlying prospect.

By way of arms they carried only a few hand D-ray drilling machines. They put up a brave defense against the milling horde of scarlet monsters that closed about them; a heroic battle, soon over.

I threw down the glasses in horror when I saw the colossal, crimson, green-eyed things snatching them up, rending them into quivering, bloody morsels, avidly crushed in terrible jaws. The savage beings fought even among themselves for the pitiful fragments of red flesh and bloody rag.

Lafollette and his fellow officers were amazed and horrified at the sight—after this "Remember Eldorado!" was a war-cry among the men from earth.

THE Selenites had surrounded the bright-walled city, were taking it by storm even as we came in sight. And high above the scintillant roof hung three titanic silver globes, upheld upon the billowing, many-colored flame-mist of the atomic blast. Thin piercing rays of red and green and orange stabbed from them at the broken walls; and the vast flaming spheres of the disintegrating atomic vortexes, fire-balls of white and purple and blue, rained down upon shattered roof and towers.

Eldorado had been pitifully unprepared. There had been one generator of the yellow fan-ray, and a single projector of the atomic vortexes. And the desperate inhabitants had hauled a dozen D-ray mining machines from their places, to serve as weapons. That was all the armament they had against the multiplied thousands of hellish, gigantic beings, and the three war-fliers.

One of the fliers darted toward us at once, while the other two kept up the bombardment of the little town. Our improved ray-projectors, with the precise skill with which our crew handled them, assured us a prompt victory. In five minutes the other ship fell in flames, a vast, luridly glaring meteor. It struck near the city; it must have crushed hundreds of the savage monsters to a hot death beneath it, but the frenzied attack went on regardless of the incident.

Both of the remaining ships came to take the place of the fallen one. Doane faced the situation with his usual coolness and skill. The Tellurian war-fliers were our equals in size and armament, though perhaps our crews were a little better trained. And certainly the increased power of the gold atomic blast was an advantage.

For some minutes we exchanged glancing rays and flaming vortexes, without visible result. The enemy fliers managed their fan-rays so cleverly that each screened the other, and no opening was left for us. Doane fought a furious battle, to win in time to save the city. The other ships were almost hidden in a terrific storm of flickering polychromatic flame.

Abruptly there was a shattering explosion below our flier, and it was plunging down in sickening flight. It seems that an exploding vortex had injured the atomic blast projectors which supplied our power. A few moments later it seemed that the trouble was repaired, for our fall was checked, and we were quickly back at our former level.

Meanwhile the innumerable leaping red hordes were closing in upon the city, in defiance of the desperate defense. Ray tubes grasped in the ungainly tentacles of the Selenites swept the glass walls and towers, despite a fierce fire from window and turret.

The moon-calves must have found entrance through the holes torn by the explosive vortexes. Great leaps carried them like titanic leaping insects forward to the roof. For a time the darting, snake-like rays from the converted mining apparatus swept low upon them. One by one, those rays went out.

Eldorado was at the mercy of the Ka'Larbah, most terrible of the wild moon-calves.

At the same time we were desperately engaged with the two war-fliers. With a daring maneuver, Doane flashed in between them, caught one for a moment unguarded, as the fan-ray was shifted. He fired with a dazzling sheet of vari-colored rays that sent the Tellurian reeling moonward.

Below us, the Selenites were pouring steadily into the conquered city. Most of what happened we did not see; it is good for our peace of mind that we did not. Few sights that I have seen are more terrible than that. Glistening, scaly, crimson things, green eyes expressionless and unblinking, searched through the ruins for the bodies of dead and dying. Long, writhing, red tentacles dragged poor, shrieking wretches from their hiding. With avid greed the monsters devoured living and dead, bodies crunching like red wax in their powerful teeth.

Suddenly the moonscape below us rocked with the force of a terrific detonation, and the bright glass city rose in a great mushroom of shattered débris of dust and flame. It spouted up, hung for a long moment in the air, and fell in a rain of ruin. Only a vast, burned crater was left.

Of the tens of thousands of attacking Ka'Larbah, only a few score escaped the desperate revenge of the conquered city. All the rest went up with the force of that mine. Perhaps it was set off by the last survivor—the world will never know.

The engineers were still having trouble with our injured generators. Once the *Comet* started falling crazily again. The lone remaining enemy flier hung over us, her flashing rays like the wings of an eagle of flame. Our desperate mechanics got the projectors to working again; we shot up and caught the other ship with the battery of a whole ray-deck as we passed inside her screening fan-ray. She was fairly fused as she hung there; glowing with vivid incandescence, she fell, slowly at first, but with gathering momentum, until she crashed like a plummet into the gaping chasm where Eldorado had been.

We set out for Firecrest at once, with the generators working most uncertainly. Despite the frenzied efforts of the engineers, the blast projectors failed to operate smoothly; and sometimes we fell alarmingly. At last, when not more than half the distance had been covered, we were forced to land.

The sun was not over twelve hours high, and we had made the alarming discovery that not a single space suit was aboard—we had embarked in the greatest haste. It was found, too, that the hull of the flier had been injured by the explosion, so that it would not hold air to last through the long lunar night.

After several hours of toil—Doane and I labored with the struggling engineers—we had the projectors functioning again. We rose easily, and covered seventy miles of the distance to Firecrest in as many minutes. Then the delicate tubes failed again, and we crushed down on the desert. This time the complicated mechanism was crushed beyond hope of repair.

NOTHING remained except for someone to attempt to reach Firecrest on foot, to send back a relief party with space suits and with special welding equipment for repairing the leaking hull.

After some hesitation, I responded to Doane's call for volunteers. I thought that, of all the crew, I had had more experience in travel on foot over the lunar desert than any other. I selected two men to go with me—both young fellows, but of considerable experience as scouts in the lunar wilderness. One of them, named Payne, I think, had lived from about the age of three years in an outlying mining settlement; the other was a rugged young Australian, who had come to the moon as a stowaway when he was fourteen.

The two of them accepted my choice calmly, though it amounted almost to a sentence of death. A very few minutes saw us ready—every moment was precious. I shook hands with Lafollette, and with Doane, who whispered a brief word of encouragement. Then I was outside the air-lock with tanned young Payne, and the red-faced, raw-boned Australian, Lieutenant Gerald.

The sun seemed hardly more than the breadth of its own disk above the black western crags. Like a sphere of white flame, it shone with a steady, dazzling brilliance; but all warmth seemed gone from its rays. I

drew my light tunic close about my shoulders, and looked at my companions.

"Thirty miles." My lips moved to form the words, but little more than a rusty grating came.

"No backing out now," Gerald whispered grimly.

"Perhaps," Payne began. But we had leapt, and his other words were lost.

Leap . . . leap . . . leap. Each leap was a terrible age. Blocks of lava rattled beneath our feet. I heard the swift breath of my companions.

Hours passed, frantic, desperate hours. The immense silver ball of the flier soon dropped under the near horizon. The sun crept down, with relentless deliberation. We had covered the better part of the journey. I recognized the country southeast of Firecrest. Then, like the finger of doom, the slender spire of a western peak was drawn across the bright face of the sun.

Night fell swiftly. The sun darkened from a cold white sphere to a ball of writhing red, shrouded in a freezing mist of snow. White flakes danced about us in the frigid air, covered rocks and craters with a crystal layer that hid obstructions so that we often slipped and fell.

A high, bitter wind sprang up, piercing our scanty garments with a painful sword of cold. A thin, steel-blue mist of ice flew upon it, biting our blue and trembling limbs. When we breathed, it seared our lungs with cold.

It was the utter cold of space, descending upon the moon. Cold that grasped and pierced and congealed. Cold that stopped all life. Cold that froze even the air to silver powder. Cold that was merciless, unthinkably intense.

Cold grasped at our limbs, hung about our waists, weighed on our shoulders, dragged us down. It cut into our bodies, gnawed at our hands, bit our faces like sharp edges of ice.

A frigid, leaden mist, of fine snow and frozen air, thickened gelidly all about. It hid the deep and bloody glare of the heatless, dying sun. It wrapped us close, leaving a silver crust of frost upon our bodies, hardening our garments to stiff, crackling, frozen armor.

Our breath froze before us, in clouds of tiny, glittering crystals.

Above, through the mist, the earth was vaguely visible, a huge luminous ball, warm and green—but far, far away! I thought confusedly of my days upon it, of warm winds, warm blue seas rolling beneath soft azure skies in a flood of sun, of warm green gardens, where trilling bird-songs sounded through sweet-scented flowering shrubs; dreamed fleetingly of rooms lit with the ruddy glow of heaters, of tables loaded with steaming meals.

A thicker wisp of freezing mist hid the earth, and we leapt on in growing darkness, and in utter silence—in the darkness and the silence of death. White rocks, hoary plains, fantastic frosted crags. A strange world of death—silent, ghostly white, unthinkably cold.

On we leapt, and ages fled. The flurries of falling snow grew thicker. Payne and Gerald became white ghosts, red-faced, puffing white steam. The air grew thin about us, exhausted by the freezing. I fought to breathe, while a cold flame seared my lungs.

The freezing mist grew thinner, as the nothingness of space crept down. Cold stars bit through it, danced mockingly before us. On we struggled. Every move was agony, every second an age of hell.

Through the darkness I saw the familiar rocks about the tavern entrance. They were near—yet I felt that I could not go on. To sleep, to relax, to die, seemed paradise. Every leap was a heart-breaking effort against that fatal lure.

As I leapt a little refrain beat through my numbed brain. "Not for me. . . . For Leroda. . . . For father and mother. . . . For the men on the *Comet*. . . . For the moon."

I saw the metal rim of the great valve, gleaming in a frozen crust. And the pale lights of the city beyond danced upon the snow.

Gerald fell to the ground, sprawled in a little huddle in the snow.

"Come on," I tried to say. But a sudden fierce pain throbbed in my throat. Blood gushed out of my mouth, froze on my face. Payne bent futilly over the fallen man, feebly tried to lift him. Then he, too, fell in an attitude of weary abandon.

I left them, struggled on. On—through clinging curtains of cold. On—fighting intangible rivers of cold. On—while my body screamed with pain. On—for Leroda—for . . .

I reached the metal door, a thick cylinder of frosted marble in its crust of snow. I fell against it, hammering it with hands that had no feeling. A great dark cloud obscured my vision, and I collapsed in infinite lassitude.

The great valve slid open as I fell. Strange figures, grotesque and gleaming like men of metal in the silvered space-suits, were clambering out. Quickly, tenderly, they picked up my fallen comrades and myself, carried us through the valve and down into the warm compartments at the top of the shaft.

Payne and Gerald were unconscious, nearly dead. I fought for my voice. The guards who had rescued us saw my struggle, poured powerful stimulants down my throat. I recovered enough strength to stammer out the story, to tell of the wrecked flier, with Doane and Lafollette in it, and to give directions for finding it without delay.

"Bris is back with his fliers," the guards told me. "He can go."

A great gladness came over me, like a welcome flood of warmth. We had won. Lafollette and Doane and the *Comet* were saved. I passed into a deep and undisturbed sleep.

When I woke again, I was in a small white bed, with Leroda sitting beside me. She was almost ridiculously attentive, but it was good to have her near. The exposure had been rather hard on me; I was in bed several days, with my beautiful fiancée, or my mother, or Valence with me most of the time.

Gardiner came twice, great, kindly man, with his cheerful jests and his news of Warrington.

Bris, with the fliers, had had no difficulty in locating the *Comet* from my description. The crew of the wrecked vessel had been transferred to another flier, and the *Comet* itself had been raised and brought back to the cavern, where it was now being repaired.

Lafollette and Doane came to my room to see me, with thanks for the dreadful trip through the night. They said they had seen my companions, Payne and Lieutenant Gerald, who were in the hospital, doing nicely.

My own condition improved rapidly; and when the fleet, a day before sunrise, left Firecrest for Theophilus, I was able to go along. A swift and uneventful voyage on the crowded ships left us at the great spaceport of that city, just as the white cone of the solar corona rose in the east.

We were greeted with a wild ovation. The whole population of the city, it seemed, was waiting at the air-lock to meet us with a thunder of welcome. Warrington's troops were passed in review through the streets, along with those men of Lafollette's which had been sent to Theophilus.

Lafollette, with his soldiers and supplies, had brought new encouragement and enthusiasm to the moon.

CHAPTER XXIII

The New Plan

WARRINGTON met us as we entered the air-lock, his shoulders still erect under the load of responsibility he bore, and his eyes still undimmed with care. He greeted us warmly, and we were taken at once to a banquet in honor of Lafollette. Following that was a conference, in which the plan that finally brought victory had its birth.

Warrington spoke to us, in his quiet, dignified manner.

"There is a plan that I have long had in mind," he said, "to turn against our opponents the natural elements and to let the dreadful night of the moon strike a blow for liberty. There are obstacles, however, that I have never overcome, though I have attempted the thing in our last two campaigns.

"Twice I have succeeded in enticing Humbolt out of New Boston. On each occasion, I was unable to hold him until it would be too late for him to return. Once the plan was to trap him in a crater—it was the one called Painted Pit, which can be entered only through a narrow defile. A hundred brave fellows had volunteered to stay and hold the pass, if Humbolt could be trapped inside, though the coming of the night would have meant death for all. Humbolt was to think that I had sought refuge in the crater, and a show was to be made of holding the pass, so that he would storm it and enter. It might have gone over, but Van Thoren's fliers saw my main force marching away beyond the crater, and that gave away the plan. Humbolt hurried back to New Boston.

"The idea is obviously impractical, while the enemy has a fleet. But the new fliers, under Doane's skillful command, might engage the fleet of Van Thoren while the action on the surface is carried out, or, at least, worry them enough to keep them from interfering with the operation."

The plan was thoroughly discussed, *pro* and *con*, but no definite action was taken upon it. In fact, it seemed that no one was able to suggest any practical means whereby it might be carried out.

Toward the end of the meeting Gardiner brought up another subject—that of a protective armor against the D-ray. It appeared that the old savant had been working on the problem for some time. He had the mathematics of it well worked out. On a blackboard set up on the rostrum, he illustrated his talk with drawings in colored chalk.

"You all know," he said, "that the destructive action of the D-ray depends upon the fluctuation of the several frequencies that compose it, in cycles incredibly rapid, so that the electronic vibration is enormously amplified in the substance under the ray, until it is literally shaken to the simpler atoms of the inert gases, when the frequency of the ray is adjusted in harmony with the natural period of vibration of the electrons."

He proceeded with the lecture, saying the same thing in more scientific language. He sketched colored drawings of the atom according to the latest theory, with a detailed discussion of the process by which the high-frequency D-ray breaks it down, with the evolution of the inert gases of the helium group.

Finally he concluded, "As you know, any etheric vibration can be canceled by another wave of the same frequency and of opposite phase. That is the principle upon which the fan-ray is based. Now I have the idea for something new. It would be a paint of some kind, which would absorb part of the energy of the D-ray, and re-radiate it with such a wave-length as will cancel a vital part of the D-ray. Against such an armor the D-ray would be no more effective than would be a beam of ultra-violet light. As I have demonstrated, the mathematical part is already worked out. There remains a good deal of research to be done, to find the exact chemical compound which will serve our need.

"If equipment and technical skill can be had, I am sure that it can be done."

The Assembly was enthusiastic in voting approval of Gardiner's plan. Funds for the work were put at his command, and he was urged to push the task with all possible speed.

When the meeting was over, I went to him and offered to undertake the laboratory work—the great Lunarian was so valuable as statesman and diplomat, that he could ill be spared for months of isolated work.

With a grin, he informed me that he already had me in mind for the task. During the long lunar day at Theophilus I worked with him over the mathematical points involved, until I was sure that my understanding of the problem was as clear as his own. Then he helped me in selecting the needed equipment, designed one or two new devices for me, and suggested in detail the method of research to be followed. The Firecrest cavern seemed the logical place for the experiment work; and it was agreed that Doane would carry me there, with my books and equipment, during the next lunar night.

Meanwhile, Warrington went afield with Lafollette. The campaigns of the day were not important, amounting to mere skirmishing and guerilla warfare with Humbolt's forces in the neighborhood of New Boston. Our men were safely back at Theophilus long before sunset. The men from earth were getting valuable training, of course, in lunar military tactics.

The sun set, and Doane duly conveyed me and my new equipment back to Firecrest. I had a gloriously happy reunion with Leroda and father and mother, and fell to my work at once.

Leroda had finished her new seal, the crescent "with the old moon in its arms," surrounded with a ring of thirteen stars, to represent the thirteen incorporated cities. The seal had ben unanimously adopted by the Assembly, as the emblem of the new free Moon Corporation. It adorned public buildings and documents of state, and as a flag with blue ground, it was carried at the head of the armies of the moon.

NEARLY a year went by. I worked as hard as I have ever done. I had a regular schedule; six hours sleep, two hours exercise—usually spent in a game of tennis or a hike, with Ledora—thirty minutes for meals, and the balance of the time in the laboratory. I had abundant equipment, and usually three or four assistants worked with me. Franklin was frequently at Firecrest; he kept up with the work, and made many invaluable suggestions. Steadily I marched toward my goal.

The work was by no means without its element of excitement. After the mathematical details were complete, the experimentation consisted mostly in making a compound that satisfied the known requirements, painting a slab of rock or metal with it, and setting it up in front of a D-ray. Usually the object was merely fused, or vanished in a puff of vapor. But some of the substances we worked out seemed to act as catalysts to increase the violence of the disintegration.

On one occasion a boulder which had been sprayed with a mixture of mercurous fluoride and calcium bromide exploded with such deafening violence, that our laboratory was wrecked almost completely. One of my assistants, a poor chap named Stanley, was killed. The heavy D-ray tube was smashed and the wreckage blown over on me. I suffered nothing worse, however, than a broken arm and a few minor contusions.

By the time I was able to be back at work, my fellow experimenters had most of the equipment repaired or replaced, and we went on as before. That was only the most spectacular of a score of accidents and misfortunes. In spite of them, we moved steadily toward our object.

Meanwhile, Warrington and Lafollette and Gardiner were frequently at Firecrest, to meet with the Assembly. Military operations had not been important. But Lafollette's veterans were now used to lunar conditions. They had mastered the "moon-calf" technique of guerilla warfare; and the raw lunar recruits, training with them, had gained much in discipline and military spirit.

At this time the strength of the Tellurians was still concentrated in New Boston. Humbolt had nearly a hundred and fifty thousand men there. Opposed to him were Warrington's force of about sixty thousand men, Lafollette's forty thousand, and the army of almost twenty thousand under Hall at Colon.

Steadily, out of long hours of patient conference, grew the plan for the final campaign that ended the war.

It was about this time, too, that Tom Dowling, something of a poet, composed the words and music to the lunar anthem, "To Ye Lunar Hills Ablaze." He had become an officer in the fleet, to the infinite anxiety and pride of Valence; he had been on a flier that rescued a little settlement attacked by a force from New Boston. Inspired by sight of the crude little fortification, defended by ragged miners with their drilling-rays, with the lunar flag that Leroda had designed waving over them, he had written a fervent, ringing lyric of patriotism. The song spread over the moon like a new wave of hope. It was sung in the streets, hummed in factories and mines, whistled in Warrington's ranks.

And Tom proved as able an officer as a poet. By the end of the year he had won the captaincy of a war-flier and proved his spurs in victorious combat with a scouting cruiser from New Boston.

At last I was successful in my research. I found that the halide compounds of one of the isotopes of barium re-radiated a higher frequency of the D-ray in such a manner as to cancel it by interference, no matter how the ray was focussed. Objects covered with an infinitesimally thin layer of this barium compound, and exposed to the D-ray, were not affected, save for a moderate heating effect.

The principal difficulty in the process had been to separate the isotopes of barium. Since the atomic weight of barium is 137.4, and since all atomic weights of simple substances, with the exception of hydrogen and a few others, are whole numbers, it is apparent readily enough that barium is composed of several isotopes, of different whole atomic weights, whose average is 137.4. But since the atomic number of each of these is 56, their chemical properties are identical, and it is quite impossible to separate them by purely chemical means.

A parallel case is that of chlorine. Its atomic weight is 35.46. But positive ray analysis shows that it is composed of two isotopes, of atomic weights exactly 35 and exactly 37.

My first experiments with barium had failed because of the presence of the other isotopes, which disintegrated under the ray, destroying the armor. But at last I devised a method of using the D-ray itself in removing these, leaving the pure isotope I required, of atomic weight 138.

Warrington, Gardiner, Doane and Lafollette were at the time in Firecrest, still working on their plan of campaign. I called them down to the laboratory when the great discovery was completed, for a demonstration.

It was made simply enough.

I took the two metal bowls in which my simple breakfast of fruit and the liquid synthetic food combination had been brought me that morning. One of them I sprayed with a thin layer of barium bromide. I set them side by side on the ground in front of my D-ray projector and began focusing it.

Focusing the D-ray, which involves the synchronization of the several frequencies and their adjustment to the natural period of electronic vibration of the particular substance to be disintegrated, is a rather slow and complicated process.

As I now worked over the tube, I spoke to Doane about the need of quick focusing in military operations; I had been much impressed by the fact that a few seconds of difference, in the time required to focus the rays, might turn the issue to victory or defeat in a contest of space fliers.

"Leave that to me!" Doane said, grinning. "But go ahead with your demonstration."

At last I got the ray focused. I closed the switch. The thin finger of intense red light flashed out and touched the two metal discs. The untreated one blew up, with a white flash of flame. The other was hurled a dozen feet by the explosion. But it had not been affected by the D-ray, save to be slightly warmed.

Doane gave vent to a wild yell of enthusiasm. Lafollette congratulated me, grasping my hand, while tears of joy stood in his eyes. Gardiner merely stood smiling at me, while Warrington began a volley of questions about the manufacture and use of the new compound.

"I knew you'd do it," he told me. "And we're ready to use it in the next campaign."

CHAPTER XXIV

Victory

BEFORE the conference was ended, plans had been completed for the final campaign. Before the lunar dawn, the repaired *Comet* carried Warrington and Lafollette and Gardiner back to Theophilus, to drill and equip their combined forces of nearly a hundred thousand men for the great attack on Humbolt at New Boston.

I stayed with Doane at Firecrest, where the fleet was being made ready for a decisive action. Acting under Warrington's orders, we were preparing immense quantities of the bromides and chlorides of barium, obtaining the metal by treating ores from a limitless deposit of barium sulphate in the Firecrest mines with the D-ray. The great machine-shops in the cavern hurriedly turned out a large number of sprayers with which the protective compound could be rapidly and easily applied.

As part of the preparation for the coming battle, the war-fliers were thoroughly sprayed with the barium halides. That made them almost invulnerable to D-rays so long as the coating adhered, though the explosive atomic vortexes would be as destructive as ever, and it was feared that the violence of explosion would break the protective film, exposing the fliers to the rays.

Nearly a thousand steel drums of the barium halides were loaded on the fliers with three hundred of the compressed air sprays.

The luminous white cone of the solar corona was again in the east. Slowly the white blinding eye of the sun came up in a sky that was a pall of Cimmerian darkness, sparkling with a million crystal stars. The frost and solid air upon the desert once more rose in thick blue mist, rolling up in turbid clouds about the peaks, presently dissipating as the sun climbed into a dark blue sky.

Our preparation occupied us until well toward the lunar noon. Then old Jenkins, as queer and red and

good-natured as ever, appeared, coming in flying leaps upon the scarlet elephantine M'Ob, with orders from headquarters.

Warrington had left Theophilus, was marching on New Boston with his and Lafollette's forces combined. Doane was to leave Firecrest as soon as possible, fly to Warrington's camp, and accompany him during the rest of the march. We were to find him in the vicinity of Smith's crater, where one of the earlier engagements of the war had been fought.

The great war-fliers were brought up out of the cavern—having been taken, for refitting and repairs, back to the cradles in which they were built. I parted from father and mother—Valence, my sister, had gone aboard another flier, to take a final adieu from her devoted Captain Tom. During the long months at Firecrest, busy as I had been, I had had many happy moments with them all. Now, as I embraced my father's aging form, and kissed the smooth cheek of my mother, and held the lithe warm figure of Leroda in my arms once more, looking into dark eyes where tears were welling up, it was with a heavy and saddening sense of the perils that were before me. Valiantly I tried to shake off a gloomy foreboding that I would never return to the dear home of my childhood and to those waiting for me there.

Then the brass gong sounded, and I had to leave them with a last laughing word of unfelt cheer, and to run through the lines to the great silver ship. A few minutes more and we were drifting swiftly southward over the towering mountains of the moon.

Six hours later we were in sight of Warrington's army, marching in long white columns down that road between Theophilus and New Boston that he had traversed so often in the progress of the war. Our fliers hung low upon the surface, and kept to the rear, in order that the enemy might know of them no sooner than necessary.

Forty-eight hours later we were in sight of New Boston, beyond the cragged summit of Meteor Hill. Walled and roofed with glass, it was like a thick slab of some white, shining crystal, lying in the dreary mountainous wilderness. It was gay with the forest of glistening towers and domes, with the bright pennons of Metals fluttering from them.

The buildings at the space-port seemed largely deserted. The fleet of Van Thoren was not in evidence at the broad landing place below the city. Our own twenty vessels hung ready, low behind Meteor Hill, while Warrington deployed his troops about the walls, and got his field D-ray units into position, as if he intended to storm the city.

The movement had not gone far, however, when our telescopes showed a little swarm of white dots in the indigo sky above, rapidly enlarging. Van Thoren had evidently been waiting out in space; now he was dropping to attack. Presently the men at the instruments announced that there were fifty-six of the silver spheres—they outnumbered us almost three to one.

Behind the ragged black mountain, Doane swiftly got his ships into position. He chose an odd formation—fourteen of the twenty vessels took places at the corners of a great imaginary cube, and at the center of each face. The remaining six vessels, including the *Comet*, were in the center of the cube, as a reserve. In this formation our protecting fan-ray screens would offer the maximum defense; and the fliers were far enough apart to interfere little with one another's fire.

THE enemy fleet dropped for Warrington's ranks, without regard for us. I suppose that Van Thoren counted on little opposition from our few fliers, built on the moon and manned by simple miners, when pitted against his great vessels from the Pittsburgh shops, with their skilled officers and veteran crews. As the fleet descended, thin searching rays and gleaming atomic vortexes began to fall upon Warrington's lines about the city. Such fire from space fliers is, however, not very effective when the troops on the ground have fan-rays and are able to seek cover in the wild lunar hills.

Doane gave the order and our fleet rose from behind the mountain and came rapidly toward the Tellurians from below. No attention was paid to our advance until we were within some five miles of the enemy—below and a little to the side.

Then the fliers in the top of our mile-square cube, at Doane's order, fired a bristling salvo of rays and vortexes. Three of the Tellurians slipped moonward in incandescent ruin. The others paused in their descent upon Warrington, and began to assume battle formation.

We continued to rise swiftly, with eleven of our ships firing scintillant rays and flaming vortexes. The bright yellow curtains of the fan-ray were extended like broad amber curtains all about us. Two more of the Tellurians went down, having been caught in unfavorable positions, where they fell quick victims before Doane's well trained crews.

The enemy fliers formed above us, in the shape of an immense inverted bowl, miles across. And the bowl dropped down upon us, until the fliers at its rim were at our own level. The Tellurians had been firing only spasdomically; but now a great burst of flaming rays fell upon us from above, and from all about the rim of the bowl. Red rays, and green, and dazzling fingers of white stabbed at us bewilderingly. And the vast fiery globes of the atomic vortexes—blue and purple and white, fell like hail upon the yellow wings of the screen-ray.

And there were dark, invisible metal projectiles, loaded with fearful atomic explosive—more dangerous to our armored ships than the flaming rays.

For defense we had the fan-rays, played from each vessel so as not only to shield it but several others. Smoky yellow walls of vibration, they cut off the D-rays, generally destroyed the atomic vortexes, and usually burst the explosive projectiles. But sometimes there were holes in the screens; and of course the other fliers had screen-rays of their own.

Steadily the great bowl, formed of silver ships, dropped lower about us, glistening in the sunlight and gleaming with the woven rays until it was like a jeweled mantle of doom. And the ships that formed the rim slowly drew together below us, so that we were soon completely inclosed in walls of wavering flame.

From all sides we received the fire of the enemy. Only our formation saved us. Had it been broken, our individual fliers would have gone down like falling leaves. As it was, we were almost invulnerable. Doane's study of three-dimensional tactics was paying a good return.

Little groups of Tellurian fliers suddenly began separating themselves from the main formation, making darting attacks, in an effort to break up our array. One of them, falling meteor-like from far above, came plunging through our screen rays into the very center of the cube. It was hurtling straight for the *Comet*. An atomic vortex left our flagship—an immense ball of blue flame—like a splendid, blazing sapphire. I saw it strike the Tellurian globe. There was a terrific explosive blast of blue fire, angrily streaked with red. Then the ship was falling, a smoking mass of crumpled, twisted ruin.

At the same time a sudden flare of yellow light burst out against the side of the flier at the upper corner of

our cube—a solid projectile must have passed its ray-screen. With half its side caved in, it fell crazily, narrow rays still blazing from it.

The loss of the ship from the strategic position at the corner of the cube broke our armor of fan-rays. I anticipated quick disaster. I was quite unprepared for Doane's next move.

ABRUPTLY the space all about us was filled with tiny bursting charges, swiftly growing into vast clouds of white mist. In a moment Doane had surrounded our whole force in the thick white clouds of the Ziker space cloud—composed of radioactive, electrically charged particles, similar to a comet's tail but of much denser material.

The dense swirling masses of smoky vapor hid the Tellurian fliers completely, though dazzling rays of ruby and emerald and topaz still burned through the ragged clouds. On the instant our ships were in swift motion. There was no delay; Doane must have planned the maneuver far ahead.

As the *Comet* emerged from the mists, an enemy ship was directly before us. There was a quick interchange of rays. The new D-ray armor—the halides of barium sprayed upon our ships—and the better training of our crews decided the encounter in our favor. The Tellurian sphere plunged downward, her hull cut half away, the bent plates and twisted girders of the wreck glowing with an infernal red.

Out beyond, we paused to build another vast cloud of dense, screening smoke. In a few minutes the sky was dotted with those great masses of mist. Our ships darted back and forth between them, firing rays and vortexes at every opportunity. Doane's captains appeared to be well trained in the dangerous work, and seemed to synchronize the movements of their ships remarkably.

The maneuvers of the Tellurians were clumsy; plainly Van Thoren was unused to this hide-and-seek method of fighting among the clouds of smoke. He was, without doubt, a courageous and able man. But he did not have Doane's genius, or Doane's years of experience in battle against fearful odds. Instead of the guerilla method of strike and run, his school taught fighting in the open, ship to ship, at close quarters.

His men must have become confused; must have blundered. He attempted to save the day by massing his fleet and plowing through the dense clouds of vapor, sweeping all before him. But Doane, with his usual brilliant foresight, evaded his charge, and fell upon him in the rear, as he emerged from the clouds.

Only some twenty-odd of Van Thoren's globes came out, to face the seventeen of Doane's that had survived the wild battle in the mist. Now Doane abandoned his Fabian policy and closed in, counting on our D-ray armor and the superior training of our crews. For hours, it seemed, we plunged through a weird storm of colored fire, a cyclone formed of flaming rays of emerald and crimson and yellow, darting and stabbing and striking like snakes; while the saffron wings of our fan rays were beaten with a hail of blazing, fearfully explosive globes of fire, the blue and purple vortexes. And again and again those dreadful curtains were cut with a blinding glare of flame, as a ship passed into incandescent ruin beneath our rays.

Van Thoren kept his dogged courage to the end. His flagship was the last of the Tellurians left—several times it had been saved only by the prompt sacrifice of another which had rushed in to shield it. He made no move to strike his colors. Instead, his immense flier came suddenly about, plunged madly at the *Comet*. He was attempting to ram us, to bring his conqueror down with him.

A hundred rays were fastened upon his ship, but he came on in spite of the fire. Even when it was a glowing mass of wreckage, when all on board must already have met a quick flaming death, it plunged on toward us. Its momentum was so great and its fall so cleverly planned that only Doane's amazing coolness and his quick brain saved us from fatal collision with the smoking wreck.

In a battle that had lasted seven hours, Doane had destroyed fifty-six of the greatest war-fliers ever built, with twenty thousand men and more upon their decks. His own loss had been surprisingly light—only five ships destroyed and two more crippled. One ship had been struck by a solid projectile, as I had seen, one rammed, and two brought down by the combined effect of vortexes and D-rays. The fate of the fifth, the *Uranus*, has never been definitely known—it was lost during the fighting in the space clouds.

Never, perhaps, in all space history, had a fleet been so decisively defeated, by a force numerically so much smaller, and at so light a cost.

Doane had broken the space power of Metals on the moon. Humbolt still had his immense force upon the ground; but Van Thoren's fleet would no longer support him or keep him supplied. And Warrington could now carry out his great plan, unhampered from space.

Tom Dowling, I might add, came through the battle with flying colors as captain of the *Sirius*. The Assembly subsequently awarded him a medal for a brave and resourceful maneuver which had saved one of our crippled ships from complete destruction.

Immediately after the battle, our fifteen remaining vessels put about in the direction of Firecrest, and set off at a high rate of speed. After we had gone a hundred miles or so, and the white walls of the city had dropped out of sight behind us, we came close to the surface and circled to the west, picking up Lafollette and his forty thousand men, who had been in camp near Smith's crater. We approached New Boston again, landing about fifteen miles west of the city, where we were completely out of sight.

Evidently the whole maneuver had been planned beforehand. Warrington and Doane must have worked out even the smallest details long in advance. The annihilation of the Tellurian fleet had been but one item of the plan.

I DID not see the next maneuver of Warrington. I can only give the reports that swept over the moon a few hours later. The general concentrated his forces just south of the city, as if planning for an assault. His D-ray batteries fired fitfully, without doing much harm to the walls.

Finally he provoked Humbolt to come out after him. Warrington had only sixty thousand men, to the hundred and fifty thousand Tellurians. Great pains had been taken to let Humbolt's spies inform him that Lafollette's forces were still far toward Theophilus. And the Metals commander must have been forced by sheer desperation to make the campaign. He had seen his fleet defeated. He knew that his cause was lost unless he could win a decisive victory. He must have hoped that his vastly superior force could crush Warrington completely.

At any rate, he marched out of the airlocks, with 140,000 men, leaving less than 10,000 to defend the city. It would have been folly for Warrington to engage such a force. But it was no part of his plan to do so. After a short skirmish, our commander retired, with the appearance of much disorder—provision and D-ray tubes were purposely left to lead the Tellurians on.

The sun, by that time, was only forty-eight hours high. Humbolt knew that it was too late for Warring-

ton to march back to Theophilus; he thought he had his old opponent trapped to die in the night. So great was his confidence that, when Warrington made a show of opposing him on the plain twenty miles south of the city, he sent an offer to receive our surrender, couched in such insulting terms, that, when the troops learned of it, Warrington was hard put to it to prevent a real charge upon the Tellurians, instead of a mere play at opposition.

Warrington affected to consider the offer. While Humbolt's advance was thus delayed, some forty thousand of Warrington's men retired beyond the mountains, and began a round-about march back toward New Boston. When Humbolt became exasperated at the delay and advanced again, the remaining men beat a prompt retreat across the plain, and made a determined stand at the mountain rim.

Humbolt lost several thousand men in vain and reckless charges up the barren slopes, with his flanks exposed to D-rays from the ridge. Twelve hours later, when he had surrounded the hill at the cost of much effort, he found that its defenders had slipped away, leaving the heavy ray-tubes that had brought down so many Tellurians.

Now his scouts saw men making a great show of fortifying a hill a few miles farther on—white clouds of smoke and dust were rising from trench-digging machines. The scouts were fired upon as they attempted to approach.

But that last hill—though Humbolt did not know it—was defended by only about two hundred men, who had been equipped with space suits. Their orders were to make as much show as possible, and to keep the Tellurians in their pursuit at all costs. Warrington, with the rest of the troops, was already between Humbolt and New Boston.

Meanwhile, squat, red-faced Jenkins arrived at the hiding place of our fleet with the most important message of the war. He brought our orders from Warrington for the final part of the war-fliers in the great campaign. We rose and proceeded directly to the city—the two crippled vessels had been repaired while we were on the ground. We landed again, a mile or so from the walls, and disembarked Lafollette and his men. They were to cooperate with Warrington in the surface operations, while we bombarded the city from above.

But those of us who had anticipated a thrilling action were disappointed. Warrington's and Lafollette's forces, drawn up in an iron ring about the walls, had a most formidable aspect. And our war-fliers alone might soon have erased the city from the map. Everything was planned to make a show of force.

The officer left in command of the city refused Warrington's offer of honorable surrender. The rain of D-ray batteries about the metropolis shot a few holes in the walls, and the fliers dropped a few atomic vortexes, which are almost more spectacular and terrifying than dangerous. When the troops of Lafollette and Warrington, drawn up in endless lines of white, started forward on the double-quick, with keen rays flashing from their ranks, the courage of the defenders collapsed, and the flags above the glistening towers signalled surrender.

The officer chose to yield his arms to Lafollette, and soon our friend from earth was in charge of the city. The air-locks were opened at once, and the troops admitted and set to work to help the citizens repair the damage done to the walls and roof.

The drums of barium bromides and chlorides were landed from the fleet, and a crew of men was set to work with the compressed air sprays to cover the walls with a protective film of the D-ray armor. It was nearly twenty-four hours to sunset when the city yielded. Ten hours later the breaks in the walls were repaired, and the coat of armor complete.

The work was hardly finished when Humbolt appeared. It seems that even then he did not suspect the trick. He had given up the campaign and returned to the city to take up night quarters, confident that the cold would finish Warrington and his men, whom he imagined to be entrenched out south of the city.

His astonishment must have been great when he saw the flag of the Lunar Corporation floating above the pinnacles of the city; greater still when Warrington sent him a courteous note offering to accept his weapons.

He proceeded, in turn, to demand the surrender of New Boston. When his offer met a grave refusal, he arrayed his teeming white-clad ranks in endless lines about the city, while his lumbering tractors and tanks pulled a thousand field D-rays into position along the summit of Meteor Hill, and upon other heights beyond the glass walls. Finally his troops rushed forward in a grand assault, while the ray-tubes vomited a storm of polychromatic splendor.

A thousand jeweled rays fell upon the walls—and nothing happened.

The new armor was a complete success. Humbolt's spectacular gesture came to naught almost ludicrously, when he discovered that neither his huge batteries nor the hand weapons of his men had any effect upon the city's walls. And he, of course, was completely at the mercy of the weapons mounted along the walls.

Still he held out, with a lot of bluster, until the sun was near the cragged black summits in the west, and already reddening in the mists of the lunar evening. The quick chill of the air seemed to chill his own ardor.

He sent a deputation of his officers through the air-lock to arrange the details of the surrender. It was to be performed with all the traditional details of military ceremony. Our fleet hung low over the scene, fifteen great globes of silver, so that I had a splendid view. The Tellurians stacked their arms, and left them at the camp, for our men to pick up.

The first part of the ceremony had a curious accompaniment. From the fifteen low-riding war-fliers ten thousand lusty voices bellowed out the stirring bars of the anthem, "To Ye Lunar Hills Ablaze," which had been written by Captain Thomas Dowling, of the *Sirius*—I am sure the heart of Valence, my pretty sister, would fairly have burst with pride, if she had been there, to hear the patriotic song her husband had written falling in a swelling rain of sound upon the army he had helped so bravely to defeat.

The airlock was opened, and the sun-burned, ragged, half-starved troops of Warrington and Lafollette marched out to form two mile-long lines from the gate toward Humbolt's camp. With colors flying, and martial music playing, the splendidly uniformed Tellurians came marching in perfect step down the lane formed by their shabby conquerors, Humbolt, in all the glory of red coat and medals and glittering braid, stalking in the lead.

At the end of the lines Warrington and Lafollette were waiting. When Humbolt arrived, Warrington received his haughtily tendered hand ray and extended it to Lafollette, who courteously gave it back to the conquered general.

Then, because of the increasing chill of the air, all parties made a hasty entrance into the city. The people, who had been chafing for years under the military autocracy of Humbolt, welcomed Warrington and Lafollette with wild jubilation.

We landed the fleet at the great space-port, which we found in excellent repair, with admirable facilities for caring for the fliers and making such adjustments

as were needed after our recent action. I was soon within the glass walls of the city; as a young officer, I took part in the innumerable balls and banquets given in honor of the victors. But my heart was seldom with them. I thought only of the dark-eyed girl who was waiting for me in the little city far across the frozen lunar wastes.

CHAPTER XXV

Peace

WITH the surrender of Humbolt and the annihilation of Von Thoren's fleet, the war came practically to an end. For a few months more there was scattered fighting, as Warrington crushed, one by one, the smaller fortified posts that the Tellurians had established about New Boston, while Hall waged a campaign that brought the rebellious Ka'Larbah once more to terms. Doane carried his space operations to complete victory in the capture of a few convoyed supply-ships from earth, sweeping the fliers of Metals from the space-lanes.

After the news of their two great disasters had been carried back to Pittsburgh, the officials of Metals Corporation could have had no serious idea of carrying the war on further. They expressed an immediate willingness to consider terms of peace.

A few months later, Gardiner and Lafollette met in Chicago with representatives of the Metals Corporation to discuss terms of peace. After a session of nearly three weeks, the Treaty of Chicago was signed. Its most important provision was the recognition of the complete independence of the moon. It conferred upon the Lunar Corporation complete freedom of trade with the earth, and liberty to govern the satellite as it might choose. Lafollette secured trade rights for Tranco, thus breaking the old monopoly of Metals in interplanetary commerce.

Late in the year (2330) Doane's fleet carried Humbolt and his men back to earth, and returned with the aged Gardiner, who was triumphant over having secured a loan which would enable the crippled industries of the satellite to re-establish themselves. In a year, too, Lafollette was back on the moon, as the ambassador from Tranco.

The organization of the new government proceeded rapidly. Based upon new ideas, which assured liberty of the people from the tyranny either of selfish minority or of ignorant majority, it placed authority in the hands of those peculiarly fitted for it, and guaranteed equality of opportunity to all.

Warrington was almost unanimously chosen as the first president. On January 1, 2331, in a stately ceremony at Firecrest, he relinquished his military authority and accepted the civil leadership of the Lunar Corporation. I remember the event very clearly. It took place before the long white-clad ranks of the army, drawn up in splendid array before the main airlock, with the imposing scintillant walls of the city on either hand, and the swarthy monotony of the cragged lunar desert stretching away under the rays of a slanting sun to a cragged horizon beyond.

With a few quiet and simple words the old general pledged his devotion to his new responsibilities. Tears glistened in his eyes as he bade farewell to the officers and men who had served him so long and so nobly.

Then someone started to sing the inspiring anthem, "To Ye Lunar Hills Ablaze." All those near joined in with heartfelt fervor; then the army took it up. All our emotion found expression in a noble pean of victory and thanksgiving that rolled over the desert, fairly shaking the same lunar hills it celebrated.

Two years later the capitol was moved from Firecrest to the new city, named Warrington in honor of the great commander, built on the former site of Kurrukwarruk, with its advantageous central location.

But during that time, all those things were not my chief concern. As soon as possible after the surrender of Humbolt, I gave up my commission and hurried back to Firecrest. I was aboard the *Sirius*—by some wire-pulling, Captain Tom had arranged to have his ship stationed there.

As the silver ring of the city's gleaming walls rose over the grim rugged wilderness ahead of our speeding flier, I vowed that I would never willingly leave it again. And though fifty years have passed since that time, I have in the main kept my vow pretty well.

Leroda, slender, and freckled a little from long days of sunshine, was waiting to meet me at the airlock. Hand in hand, happy and joyous as two children, we walked through the great metal valve and strolled together down warm bright streets gay with vivid, fragrant plants. It was a long time until we came to the central tower building, where Mother and Father were waiting.

Valence, with her sun-burned, brown-haired Tom Junior, had been waiting to take possession of the eager Captain Dowling.

On January 1, the same day that Warrington was inaugurated into the duties of president, Leroda and I were married. The ceremony was quiet and simple, with only a few friends present. It was just after the inauguration, and Warrington and Gardiner had been able to come up, to offer their wishes for our happiness.

A few days later—we had spent our honeymoon simply at Firecrest, both feeling that we had enjoyed enough of travel—Gardiner pressed me into service again as a laboratory assistant. He was still working on his old dream of ether communication with Earth. Despite his age and failing strength, he devoted himself to the problem with remarkable energy. Two years later he had designed a short-wave transmitter that successfully penetrated the Heaviside layer. By the time of the old scientist's death, several years later, he had brought earth and moon together with the bond of perfected radio-television communication.

DURING the past fifty years intercourse has progressed marvelously in a score of ways. To Gardiner's radio-television was soon added Hamlin's new atomic attractor, which quickly antiquated the old atomic blast. Now great liners make the trip from earth to moon in four days, with a comfort and safety to the passengers that seems wonderful in comparison with the hardship and danger of flight on the slow and clumsy ships of my youth.

Better communication has done much to foster cordial relations with the earth. The moon has been freely admitted to the brotherhood of corporations, and her citizens are received with respect and friendship in every city of the earth.

Good feeling with earth has done much to build up the moon. The tide of immigration was soon flowing again. Our world has increased vastly in population, in industry, in commerce. The number of incorporated cities has increased from thirteen to forty—Firecrest was admitted to the Lunar Corporation as a sovereign city in 2321. Now, in addition to the broad roads that bind those cities together, they are united by the new vacuum tube-ways.

The exploration and development of the moon have gone on by leaps and bounds. Now most of her farther side is well known, and miners and farmers are steadily pushing civilization forward, against the vanishing

(*Continued on page* 89)

Elaine's Tomb

By G. Peyton Wertenbaker

Author of "The Chamber of Life," "The Ship That Turned Aside," etc.

CHAPTER I

An Idea of Charles Weber's

THERE was often more life in the small colleges of my early life than people generally realized. When I graduated from my state University and went down to teach at Wilmar College, I resigned myself to four or five inevitable years of boredom. The professors, I thought, would be provincial; the students would be country boys, rude and uninterested in any sort of intellectual existence. To some extent I was right. Yet the extraordinary adventure I must tell here would never have occurred if I had not gone, where it began, to Wilmar College.

My immediate superior among the members of the Faculty was a young man like myself, Charles Weber. Weber had been at Wilmar five years, and even there his genius had not been recognized. In the solitude and obscurity of a small school, he carried on his experiments with ideas so far-reaching and diverse in their implications that he could not himself entirely grasp them. He was too deeply and personally immured in his work to have achieved any publicity. He lectured to his classes twice a day. The students knew him as a pleasant young man, slightly (and conventionally) absent-minded. The rest of his time was free. He spent it in the way that he preferred, isolated in the small laboratory he had fitted up behind his house.

My future life was dictated, almost fortuitously, by this quiet man and by a girl, Elaine Stafford. It is nearly impossible to compare and measure her influence over my subsequent actions against that exercised by Weber. Subtle, intangible things sway a man in the more vivid movements of his life. I know that Elaine, unknown to either of us, made for me the decision that shaped my adventure. Perhaps, in some profoundly subsconscious way, she foresaw and determined, even, where it would end. There was no surprise in her face at the instant when, a long time afterward, she awoke and found me bending over her.

I don't know when I became aware for the first time that I loved Elaine. The truly momentous occasions in our lives are usually forgotten—those which lead impenetrably to the sudden, remembered, inevitable climaxes about which stories are written. Elaine was a freshman student in my chemistry class. Certainly I must have noticed her the first time I met the class. I must have singled her out unconsciously from among the others. Within a few weeks, I know, I found myself considering her, somewhat bewilderedly, during the hours when there were no classes, and when I should have been at work.

Elaine Stafford was interesting and mysterious to me in a way that I can hardly explain. There was no actual suggestion of intrigue or of sensual mystery, such as we commonly associate with these words—she had certainly none of a courtesan's allure. Her charm, as I was aware of it, seemed to be something unknown to herself: a sort of inarticulate life within, that spoke mutely to me with an assurance that we had mutual desires, mutual understandings.

I used to watch for her when the bell on the campus stammered in its sleep and began to ring. She would always come promptly, walking on the alert soles of her tennis shoes. She always seemed to wear blue or white—sport clothes rather than gowns—with a beret over her smooth, slightly waving brown hair. I never tired of watching her. She was always silent and absorbed, a faint smile on her lips (thinking, perhaps, of beautiful things, and perhaps of nothing); and it always seemed to me that she was extraordinarily, miraculously clean.

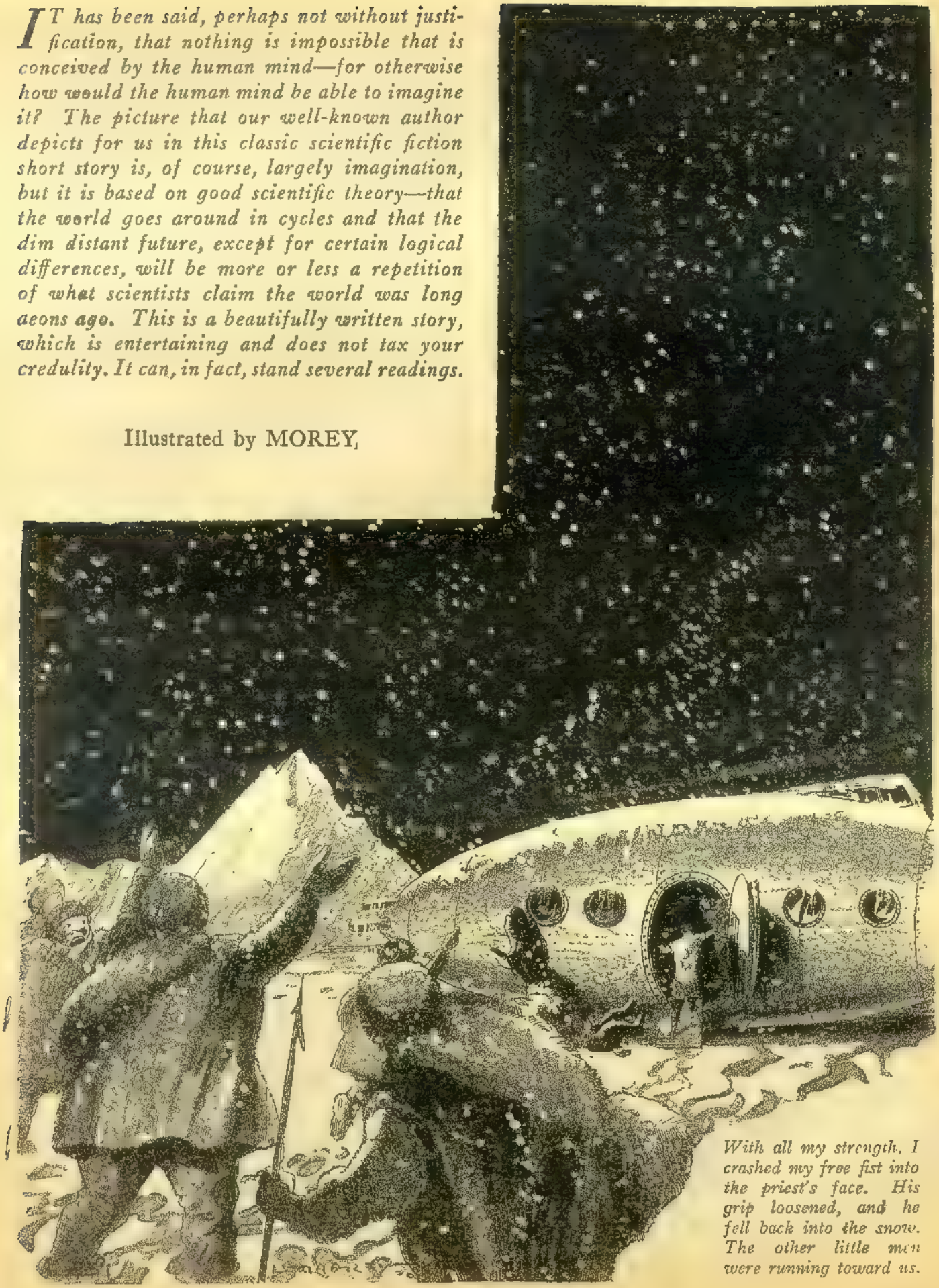
For two whole years, and for part of a third, I used to lecture to her daily. Often my lectures were addressed almost personally to Elaine. Because of her presence, I tried to make them beautiful and imaginative in a manner that, before, I should not have thought chemistry could be. Because I wanted her to listen to me and understand me, I tried to render interesting lectures; and after awhile I discovered that my classes were growing popular among the students. They attended in growing numbers. They watched my face while I spoke, laughing readily and without restraint at my witticisms. But Elaine never seemed to notice what I was saying, and her eyes remained absently on the floor. I wondered in what way she always succeeded in making high grades; I wondered what suppressed emotion made her care for chemistry and go on with it, even after her requirements for a degree were satisfied.

All this while, I never spoke a single word to her on any subject except chemistry. What would I have said? I was a young man, but I was older than any of the boys she knew. I was a professor. I had no way of meeting her more intimately. Then, too, my life had been spent since childhood in the midst of work and speculation. I was a scientist, well bred but without any distinguished social graces. If Elaine had been accessible to me even as a friend, my shyness and reserve before youth would have isolated me from her understanding. I was afraid that she would see no further than the exterior, which in all earnest men is, in one way or another, slightly ridiculous.

But I had made a friend of Weber. I had been admitted to his laboratory and his work. We were engaged in some experiments together, although, I must admit, my part in them was slight enough. It was an inspiring thing for me to follow his fine imagination moving easily among ideas that awed and startled my own mind. Much of his work I could not grasp. Sometimes he was too absorbed with it to spare me an ex-

IT has been said, perhaps not without justification, that nothing is impossible that is conceived by the human mind—for otherwise how would the human mind be able to imagine it? The picture that our well-known author depicts for us in this classic scientific fiction short story is, of course, largely imagination, but it is based on good scientific theory—that the world goes around in cycles and that the dim distant future, except for certain logical differences, will be more or less a repetition of what scientists claim the world was long aeons ago. This is a beautifully written story, which is entertaining and does not tax your credulity. It can, in fact, stand several readings.

Illustrated by MOREY



With all my strength, I crashed my free fist into the priest's face. His grip loosened, and he fell back into the snow. The other little men were running toward us.

planation. Sometimes it was simply too complex for me.

ONE evening, when I called at his house, I found him weary and despondent. He had been working on an idea, of which I had received only vague hints from time to time over a period of six months. This was near the close of my third year at Wilmar College.

"Alan," he said, lighting his pipe with a perplexed frown, "I'm not going to be able to come back here next fall."

Startled, I said, "Not come back? Where are you going?"

"I'm going to Egypt," Weber said.

For awhile I sat there and tried to puzzle out for myself why he should want to go to Egypt. I recalled something he had said once, but it was only a hazy impression. Finally I asked him, "What have you got to do in Egypt, Weber?"

He glanced at me in surprise.

"Haven't I ever told you?" he said. I shook my head. "Why, the greatest of all my researches is connected with Egypt—with some temples there."

"Tell me about it," I said.

"There's not much to tell—just now. While I was at Harvard, you know, I had a chance to go to Egypt with Lord Rayvon, and I took it. We found some unknown temples there, of the most remote antiquity, that suggested an idea to me. But Lord Rayvon, as you may recall, died suddenly, and I had to come back. I've kept the temples a secret, for fear they might be disturbed in my absence. And I've tried to work out that idea of mine over here, but I'm at a standstill. I'll have to go back."

"But what's the idea, Weber?" I insisted, moved by the atmosphere of mystery he had created.

"You'd laugh at it," Weber said. "It's a fantastic idea. But I think there's something in it."

"Go on."

"You are familiar with the work that has been done lately with glandular injections and other attempts to restore the life of people who have just died?"

"Yes, of course."

"Well, I found these temples," Weber said, "and as well as Rayvon and I could estimate, they belonged to a civilization in Egypt older than any that has so far been known to exist. Alan, they are incredibly old—perhaps sixty or seventy centuries before Christ. They antedate the Pharaohs by thousands of years."

"Good Lord!" I muttered.

"But that wasn't all. What amazed me was this: we found bodies there in a perfect state of preservation. It was not embalming of the sort that produces ordinary mummies such as we have found in Egypt. It was some process infinitely superior to embalming—a process of which embalming may have been merely the decadent survival handed down to later civilizations by the priests."

"And is that," I said, "what you have been trying to discover?"

"No—better than that. There were inscriptions, you see. They were difficult to decipher—a language with peculiarities I had never encountered before—but they were alphabetical, not picture-writing. Rayvon knew all about inscriptions. He translated a few of them roughly. And Alan, they were the damnedest things you ever saw! They hinted at scientific knowledge absolutely unknown to us. They *were* only hints, of course, but they suggested amazing possibilities to me. I can't begin to tell you everything about them; but what I seized on at once was the suggestion that those people knew a way to revive life in their dead kings."

"But that's absurd!" I exclaimed. "If they could revive their kings, what did they leave them in those temples for?"

"It's not so absurd as it sounds," Weber said. "That's the interesting thing about it. It seems that the kings had been preserved before the process for reviving them was known. It was all linked up with a lot of mysterious religious ideas. Apparently, though, the kings were Messiahs of some sort; and the priests (who were the scientists too) expected to bring them back some day, in the midst of an expected crisis, to save the world."

"I see," I said thoughtfully. "And then the crisis came along, of course, and something happened so that they couldn't revive the dead kings?"

"That's the way Rayvon and I figured it," Weber said. "Anyhow, what struck me at once was the possibility of making something out of those obscure hints about reviving life. That's what I've been working on, whenever I could spare the time, ever since. But," he added, "as I told you, I'm stopped. I can't do any more without going back there and trying to decipher some more of those inscriptions."

Weber told me a great many things that night about the temples in Egypt, and about his experiments. But, as you will shortly see, there is no need for me to repeat all that he said, because it came to nothing in the end. Nothing—that is—in the way that he expected. We sat up half the night, talking about Egypt. Weber was determined to go.

"They'll give you leave of absence for a year, you know," I told him. He nodded.

"Yes, I think they will."

Rising and struggling slowly into my coat, I murmured, "I wish I could go along with you. That's fascinating stuff you've been telling me about."

Weber laughed.

"Why *don't* you come along?" he said. "I'll be glad enough to have you." I shook my head.

"I couldn't manage it," I said. "I haven't been here long enough."

"I don't know . . . perhaps it could be arranged . . ." Weber said thoughtfully.

I walked home in the spring darkness and the silence, my feet falling in a muffled sound on the hard earth of the road, my thoughts mingling chaotic visions of dead Egyptian kings with the tantalizing picture, never quite buried in my mind, of Elaine.

CHAPTER II

Temples in the Desert

THANKS to Weber's influence, I was able to go with him. When I left the President's office, realizing that I had before me a year of travel and leisure in Weber's company, at first I was incredibly happy. I walked across the campus, looking with a certain relief at the buildings and the old trees. Three years of them should have been enough for a little while.

Later, when I had grown used to the idea of my release, I began to wonder whether I cared so much about going. I had been physically content at Wilmar; I felt a sort of affection for its remoteness and for its unsophisticated people. I regretted that I should have to go away from my small house, with the woods near by and the old road in front that led to the river. And there was Elaine.

The last time I should see Elaine would be this morning, when I held my examination. I walked over to the building with slow steps, glancing around at the students on the walks. If I saw her now, perhaps I should be able to speak to her, and tell her. But Elaine was not among the students.

I went in. When the bell rang, I was writing my questions on the blackboard. I didn't see Elaine when she entered.

I spent that morning in my office near the class room. Every few moments a student would knock wearily and come in to ask me questions. I'm afraid I wasn't very helpful—I was preoccupied with other things. I was thinking of Elaine, who was writing her examination in the other room. With the greatest ease and dignity, I thought, I could go to the door and call her. The others would look up abstractedly, and go on writing. I could ask her to come into my office; then I could tell her. But of course, I wouldn't.

There was another knock on the door.

"Come in," I said. The door opened gently. Elaine was there. I looked up startled and a little guilty.

"Good morning" I said. "Won't you sit down?" I pointed out a chair.

Elaine smiled faintly, as she always seemed to smile, and said, "Thank you, sir."

"Is the examination hard?" I asked her anxiously. "Is it giving you trouble?"

"No, sir; it's not very hard. I wanted to ask you one question."

It occurred to me fleetingly (as if it mattered!) that this was the first time Elaine had ever questioned me about an examination.

"What is it?" I asked. For a moment we looked at each other intently, as if we each had something else we wanted to say. I was disturbed. But that might have been an illusion. I dropped my eyes, and drew aimless designs with a pencil, on my blotter.

She asked me about one of the problems, and I explained it briefly. She listened in silence, still watching me. Then I leaned back in my chair, and she stood up.

"Thank you, sir," she said. She was about to leave.

I said—"Miss Stafford."

"Yes?"

"Are you going on in chemistry next year?" Elaine nodded.

"Yes, sir—if I get through all right."

"I just wondered," I said lamely. "You're a good student . . . I won't be here next year, you know." I looked out of the window at the President's office across the campus.

Elaine said slowly, "You won't be here?"

"No. I'm going away on leave of absence."

"We were both silent a moment. There was a knock at the door. Ignoring it, I waited until Elaine said:

"I'm sorry, sir. I've enjoyed your class."

It was impossible. I couldn't speak to her. I shrugged slightly, and looked at her with a smile.

"I'm sorry, too," I murmured. "I'd like to be here." I called abruptly, "Come in!" Elaine turned away, while the door opened.

That was all. I didn't see her again before I left with Weber in August.

I THINK Weber found me a dull companion during the trip across to Marseilles and Cairo. We had books with us. We would sit on deck during the day while Weber read and I looked at the sea, unable to read. Life held more zest for Weber than it did for me. He was capable of enjoying his holidays as completely as he enjoyed his work. In the evenings we would watch the people dancing inside; sometimes he made an acquaintance, and would walk about the deck for hours, talking to a young man, or to a girl. But I spent my time standing by the rail at night, looking at the water as it went by underneath, gurgling absently and mysteriously to itself.

Weber was worried and solicitous. One day, near the end of the voyage, he asked me whether I felt well. It was late in the evening, in the darkness on deck, and we could hear the orchestra playing distantly. I was tired of thinking about Elaine.

"Would you think me very much of a fool if I told you what's the matter with me?"

Weber smiled, and said, "Probably. But tell me anyhow."

So I told him. He listened quietly, smoking his pipe until I finished.

"And you said nothing to her?" he asked me finally.

"No." I tapped my fingers on the chair, and frowned at the moon rising out of the water.

"But my dear fellow!" Weber said. "It sounds to me as if—just possibly—she may have been interested in you."

"Do you think so?" I said. "But I couldn't say anything. I'm a fool about things like that." Weber nodded.

"I know," he murmured. "But she'll be there when you go back."

"No—this will be her last year. There's nothing to be done."

"Where's she from?" Weber said.

"I don't know. I don't know anything about her. I never dared to talk to her."

"Weber laughed softly, sympathetically, in the darkness.

"You *have* been a fool, Alan," he said. "But you'll get over it."

"I doubt it," I said.

"You can change your mind, if you'd rather, and go back?"

"It would do no good." I shook my head morosely in the darkness.

"Well—wait till you see Egypt," Weber suggested. "That will help you."

We arrived in Cairo a few days later. Some day, when I write my book about those times, I will tell what I saw in Cairo. It was, to me, a strange, bewildering place, full of noise and heat and color, very different from the Cairo of today. But Cairo hardly enters into this story. During the week we spent there, Weber, who was an experienced traveler, guided me about among various officials, arranging the details of our expedition and fitting it out.

Early one morning, with our guide, we set out along the Nile. Even if I remembered it—which I don't—there would be little enough to tell about that long, monotonous trip. I recall best the miles of sand when finally we left the Nile and headed into the desert, days later. We were quite alone, in country where oases were rare. The temples were only a day's ride distant from the Nile; but they lay in a spot as empty and deserted as the moon.

We saw them first as we came to the top of a small rise. They were not pyramids. There were three temples, grouped together about a central court. Bushes and weeds, and a few tired-looking trees grew about them and in the court. They stood massive and white against the long rays of the setting sun. They hardly resembled the sort of architecture we speak of as Egyptian. They seemed almost modern in design. To me, it seemed quite strange.

Our guide looked at them impassively and said nothing. Weber smiled faintly. He was relieved that he had been able to find them at all. Our two cars rolled gently down to the ruined court, and stopped.

"Here we are," Weber said carelessly. But we sat there awhile in silence, looking at them, oppressed with a feeling of awe before these buildings that had stood here in the desert, almost unvisited, for perhaps eighty centuries or more.

CHAPTER III

The Fever

OPENING from the court were lofty halls and antechambers where men had worshipped once. Passages led away from them into other rooms, and downward into the crypts where the kings lay. We made our camp in one of the halls. It was cool and dark there, during the day, and the sun beat down blindingly on the court outside. At night the stars were visible from the place where we slept, a few brilliant stars between the distant hill top and the outline of high arches. The wind stirred restlessly along the floors and among the fallen stones of old altars.

On the day after our arrival, leaving our guide, we went down into the crypts. There were long, dark stairways winding down from the halls. They led finally to a low room in each building where piles of strange ornaments and treasures lay, covered with dust. They were the kings' possessions, undisturbed for thousands of years. Over the door of each of these rooms Weber pointed out to me an inscription in a strange alphabet.

"What do they mean?" I asked him.

"They are a warning. Rayvon translated them to me. I have forgotten the words; but they utter a curse on the head of any man who disturbs the rest of the kings before the appointed day. Whoever intrudes on the king's sleep, they declare, or carries away his possessions, will sicken mysteriously and, at last, die."

I shivered slightly.

"It doesn't sound like a very great threat," I said. Weber laughed.

"The natives take it quite seriously. You see? None of those treasures have been disturbed—except once, when Rayvon and I examined them. But we carried nothing away."

I said thoughtfully, "Rayvon died . . ."

We left the treasures untouched, and found the entrance to the king's burial chamber. There was a secret door, cunningly concealed. Weber had been there before; he knew the secret. He pressed a portion of the wall above his head, and it swung inward, pivoting around a hidden hinge. An opening was revealed on either side of the massive door, large enough for a man to pass through crouching. I boosted Weber up; he gave me his hand and assisted me up behind him. We stood on a ledge about six feet thick—the depth of the wall—and darkness lay beyond us.

The crypt was ventilated meagerly in some fashion which we could not at once discover; the air was musty, but apparently pure. Weber leaped down to the floor within, his torch lighted, and I followed him. Together, we found the bronze lamps he had predicted we should find. We poured oil into them, and lit them.

The room, in the lamplight, was simple and small. The walls and floor—even the ceiling—were covered with inscriptions in small letters of the strange alphabet I had seen before, carved into the stone with delicate precision. Before us, a series of broad, low steps led up to a platform. At first I couldn't see the body; but when I ascended the steps, I found it. The body lay in a depression on the platform, surrounded by a soft, fine dust that might once have been clothes or cushions. The dust rose gently and hovered over the body in the draft of air we had created.

Weber said softly, "This is Tomen-Ashto."

I nodded silently, examining the still figure at our feet. It was a startling picture. The body lay naked, not swathed in the coverings of the Pharaohs; its hands were at its sides; it was quiet and calm. There was no color in the skin. It hardly seemed the body of a sleeping man, yet it hardly seemed quite dead. It was the body of a man composed for rest, caught in the moment between life and death. I touched his flesh hesitantly: it was cold, but it yielded to my fingers. Gradually the skin rose again, after I brought my hand away, and it remained white.

"You see," Weber said, "—it's death."

"Yes," I muttered, smiling faintly.

"And yet the body has been here for eighty centuries . . . He might have died only five minutes ago." That is how the king looked.

I seated myself on the steps, staring curiously at the body, while Weber brought out his notebook and a pen. I waited awhile, immersed in my own thoughts; Weber copied down page after page of the endless inscriptions. Before long, the atmosphere of the place seemed to grow oppressive. I rose.

"Do you mind if I wait for you in the other room?" I asked. "If you don't need me just now?"

Weber nodded absently.

"Go ahead," he said.

I climbed up to the doorway again, and crept over into the room beyond. The treasures were there, thousands of delicate jewels and vessels of gold and silver. I spent hours examining them while I waited for Weber. They were so old that even their value hardly impressed me. They wrought in my imagination vivid pictures of the ancient world over which Tomen-Ashto had ruled, a world of which there remained no record, no memory, no legend—nothing, except the still body lying beyond the heavy door and the faint whisper of old inscriptions.

Weber stirred finally, and came back through the small doorway, closing it carefully behind him. I said slowly, rousing myself from a deep lethargy, "What have you discovered?"

"I don't know yet," Weber said. "I'll have to work on them with Rayvon's code."

Our voices sounded muffled and distant; I tottered a little, dizzily, as we climbed the stairs, and my forehead felt cold and damp.

DAILY, for a week, I worked with Weber in the temple of Tomen-Ashto. Overcoming the obscure feeling that troubled me in the crypt, I spent hours there copying long inscriptions while Weber, seated near the body, laboriously translated them into English from Rayvon's code. Often there were passages of which Weber could make nothing—Rayvon had not lived long enough to complete his notes. Many of the inscriptions were unimportant—endless praises of the king and of the gods, long histories of forgotten wars. Once in awhile, however, Weber would stumble on something that seemed to give him a hint of what he wanted. An exclamation would come softly to his lips; he would go on impatiently until the passage ended or wandered off into other fields.

The sensation of strangeness never left me—it increased as the days went on. Gradually, while I worked, I would fall into a dream-like state, copying down the lines mechanically, while dim visions moved slowly through the silence of my brain, full of a significance that eluded me, forgotten as soon as they were conceived.

In the evenings, while Weber put his ideas together and tried to formulate into a clear meaning the scattered sentences he had found important, I rested in the court yard, listening to the sound of our guide's voice singing mournful songs softly in the darkness. Or I wandered languidly about the desert, my bare feet sinking into the sands still warm and sensuous from the pressing of the sunlight over them all day. I was tired. My mind was like an empty hall, stirring with the

distant echoes of momentous events. And I had forgotten Elaine.

One morning, when I awoke, I was unable to rise. My limbs were heavy and weak; my body was covered with a slight perspiration. I had tossed all night in the midst of nightmares I could not remember. I refused breakfast, unable even to taste it.

Weber examined me solicitously. At first he thought of carrying me back to the village on the Nile, where I could find some sort of medical aid; but I seemed very weak, and he thought it was only a touch of fever that would go away as soon as I had rested and dosed myself with quinine. He left me in the guide's care, and went down to the crypt again.

There is nothing clear in my recollection of the days after that. My consciousness faded gradually, until I remember only long periods of time when I lay, nearly lifeless, on my pallet, while chaotic dreams pursued each other through my brain. There were long moments, at rare intervals, when my eyes would open and I would see clearly the dim, high hall around me, and the brilliant white sunlight of the court, the guide's hunched figure sitting motionless between two columns. The pictures would be fixed and interminable, without life. I would see them for awhile impersonally, as if they had no interest or significance for me. Then my eyes would close again, and the dreams come back.

Once or twice I wakened suddenly in the night to find Weber bowed over me, his face twisted and distorted by the flaring light of a lamp. I had forgotten him. My eyes opened wide and stared at him, startled, filled with horror, while I struggled to understand something whose meaning I had lost. Then his face blurred and faded into darkness, and I slept again.

One night, a little while before dawn, sleep dropped away from me suddenly, as water drops away from a body when it rises from the sea. I opened my eyes upon the dim length of the hall. Weber worked under a lamp at the far end. Shadows moved fitfully about the hall, as the flame of the lamp turned and bent with the wind. My head was clear.

"Weber," I called. My voice carried across the cool floor steadily and strong.

Weber looked up, startled, and stared at me for a moment. Then, with an inarticulate cry, he jumped to his feet.

"Are you awake, Alan?" he said.

"Yes."

He came swiftly toward me down the hall and stood over my body, immensely tall in the lamplight.

"What is it?" he said. "Are you better?"

"Yes. I think so. But it won't last."

"You know that, too?" Weber said, frowning.

"I've just found it out," I answered.

For a few moments we said nothing, as if the approach of death had rendered speech no longer important.

"Weber," I said at last, "do you remember Elaine?"

"Yes."

"Say something to her, will you? Anything will do."

Weber stood motionless for an instant. Then his body moved, heaved into an intenser life, and he said, "Alan! I've something to tell you."

"What?"

"I've discovered something."

"Your secret?" I said. "How to bring back life?"

"No—not that."

"What, then?"

"Alan," he said, "I was working over those inscriptions a few nights ago, trying to understand them. I found a formula, an obscure method, written in unfamiliar terms. I don't know what it is—whether it's science of a sort we've never known or whether it's magic. But I think I see what it means, what it will do."

"Is it important to me?" I asked, with the deep egotism of death.

"Alan, it's the secret of suspended animation. It will take your body and preserve it, as these kings are preserved—if it works."

I thought for awhile without interest, picturing myself a body like the body of Tomen-Ashto, lying dead in the stillness of a dark crypt.

"What does it matter, Weber?" I said finally.

Weber laughed nervously.

"Matter?" he said. "Why, it means that I can keep your body as it will be at the moment of death and preserve it here for years, if necessary, while I work out the secrets of these people. Alan, I'm sure that I'll find what I'm looking for, sooner or later. I'll find it soon! I'll be able to bring you back to life."

"And then?"

"You'll have Elaine."

"Elaine . . ." I muttered her name restlessly in the silence. "Yes—that would be worth it."

Weber knelt at my side.

"Alan!" he said. "You depend on me to do this. You're going to die—yes. But at the very moment of death I'll take your body and treat it as those Egyptians treated their kings. And then, as soon as I find what I'm looking for, you can trust me to bring you back again."

I nodded, and glanced at his face.

"Yes, I'll trust you," I said. He seized my hand and shook it nervously.

I looked away, out through the columns to the court yard, and beyond that to the desert. Dawn was coming. A faint, cold, silver light was rising stealthily out of the ground.

I closed my eyes.

"All right," I muttered.

Velvet curtains fell, rustling, about my head.

CHAPTER IV

The Garden of Istal

VOICES murmured for a long while, growing louder. I was cold, but warmth came sluggishly into my body. There was a tingling, itching sensation in my skin. One of the voices said:

"That's enough."

I opened my eyes.

Two men stood over me. They were not old men. They wore white tunics, falling from the shoulders to the knees, belted at the waist. One of them rubbed my arms vigorously with a lotion that had a pungent, penetrating smell. The other removed from my legs two metal bands, from which wires went to a small cabinet on the floor. The room was lighted with a huge electric torch on the wall that gave out a diffuse, soft glow.

I murmured mechanically, "Where's Weber?"

"Weber?" The man at my side examined me impenetrably, and shook his head. He dried his hands on a towel; the lotion evaporated slowly from my body.

After awhile I said, "Isn't Weber here?"

"No," the man said, pondering. "Weber isn't here."

"Where is he?"

"You don't understand," the man said. "Who was Weber?"

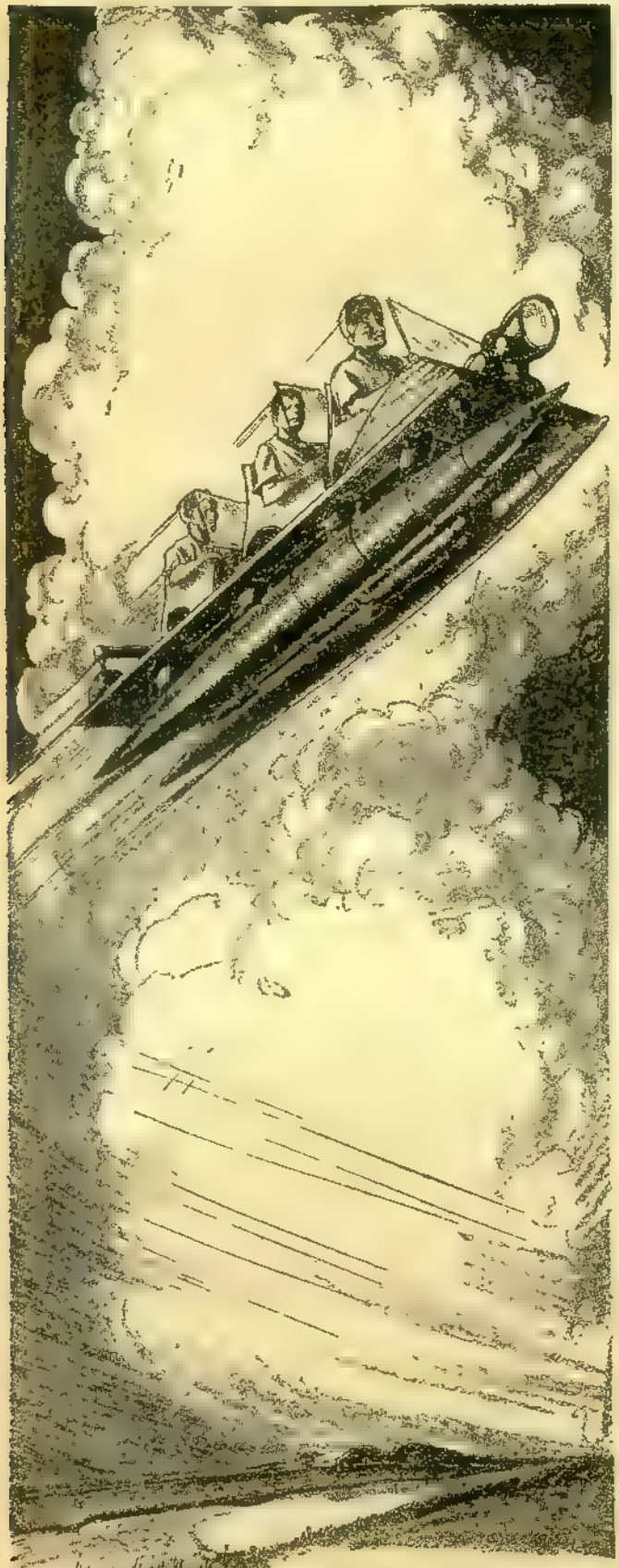
I considered his question carefully. I was confused. Instead of answering, I said, "Have I been here long?"

"Yes. You've been here a long time."

"How long?" I said.

The man looked at his companion, puzzled, and asked, "How would you say?"

"A long time," the other said, "a very long time."



Without wings or propeller, the machine rose quietly from the ground and swerved up into the sky.

I rested awhile. Then I asked, "What year is it?"

Neither of the men answered. I looked from one to the other, waiting. A vague alarm began to trouble me. I said again, "What year is it?"

The men said nothing, watching me. Finally the man at my side asked politely, "Would you like to get up? Here is a suit for you." He held out a tunic similar to the one he wore.

Very suddenly I was awake. A suspicion entered my head, surrounded by confused memories of my existence. I stood up, and grasped the man's arm. I said, "I *must* know what year it is."

But the men looked helplessly at each other and at me. "We don't understand," they said.

I released the man's arm. I took the garment he offered me and slipped it over my head slowly, considering. The matter was not yet quite clear. There was an odd difficulty . . .

The room was the small room under the Temple where Weber and I had worked. One of the men leaped up on the ledge by the door and lowered his hand to me. The other man gave my feet a lift, and then followed me. We crawled through to the other side, and leaped down into the room where the treasures had been. The treasures were all gone. The men led me toward the stairs. One of them said, "What is your name?"

"My name? Alan Frazer."

"My name is Istal," the man said who had been at my side.

The other added, "I am Dras."

We climbed the stairs in silence. The stairs were crumbling away.

The roof of the Temple had fallen in. When we came to the end of the stairs, we clambered up over loose rocks, through a jagged opening, to the light of a late afternoon. It was not very bright. A small breath of wind, blowing through the ruined walls, penetrated my slight tunic, and I shivered.

"Are you cold?" Istal asked.

"Not very cold," I said.

I looked up at the sun. It was a small globe, tinted with red and resembling a full moon, hanging in the sky. The sun wore a questioning look.

Frightened, unwilling to understand, I said:

"Has it been a very long time?" I pointed to the sun. Dras and Istal followed my finger, glancing up. Dras said, "You mean the sun has changed?"

"Yes."

The two men nodded, a look of comprehension in their eyes. They showed no surprise.

"It must have been a long time," Dras said.

"But how long?" I insisted. "How many years?"

Dras shrugged.

The desert was gone. A tall, sickly sort of grass grew all about where the desert had been, like the grass that springs up along the shore, close to the sea. It waved gently in the wind, rustling, more desolate than the sand had ever been. When I saw the grass, I began to understand.

Near the ruins of the old buildings, half hidden in the grass, stood a small, light machine. Dras and Istal led me toward it. On a smooth, narrow platform of metal, it held three low seats. The men beckoned me to the center seat, and took the others themselves. Istal, in front of me, made a motion with his hands, which were concealed from me. There was a low humming under the floor. Without wings or propeller, the machine rose quietly from the ground and swerved up into the sky.

I leaned forward, touching Istal on the shoulder.

"How does it run?" I said. Istal smiled.

"I don't know." I glanced at Dras.

Dras said, "Maybe someone can tell you later."

The machine flew swiftly, but not so swiftly as it was able to fly—something I would learn in time. The men were in no hurry. Our faces were shielded from the wind by low, sloping panes of glass. I rested in my chair, trying to think clearly. I could feel nothing but a sort of deep terror. I understood that centuries had passed, perhaps thousands of years. The sun had changed . . . perhaps millions of years. But the men spoke English.

THE grass altered gradually under us, grew more green, and passed imperceptibly into a thickening stretch of woods. When the woods ended, we flew over cultivated land. There were houses at intervals, glittering, fragile structures of an unfamiliar metal. We passed over some people from time to time. They strolled about in a leisurely fashion along walks of the same metal, talking. They were dressed, like my companions, in light tunics.

We came to a wide canal, flowing with mathematical precision obliquely across our course. Beyond the canal, our machine dipped down, and headed toward one of the metallic houses that stood near the water, under a group of trees. We landed gently on a lawn, close to the doorway. Dras and Istal stepped down. I followed them.

"This is the house," Istal said. The words sounded oddly like an old sentence from a child's French Grammar.

We entered the house. Dras went on down a long hall to an open doorway through which I saw the cool shade of the garden behind the house. Istal took me up by a moving escalator to the second story. The inner walls and floors were also of metal, and the house had no doors. Metal curtains hung in all the doorways. Istal took me to some empty rooms.

"You shall bathe and put on another suit," he said. "Then we shall have food for you in the garden."

The rooms and the bath were not unlike those I had known before. I refused to think during the short while I needed to bathe. Later, after my breakfast, I would think.

The meal was served in the garden. There were three people seated at a table when we arrived. One was Dras; the others Istal presented as his sister, Talis, and his father, Lasti. Lasti was a vigorous old man who examined me with keen eyes and said little at first. Talis, a handsome girl dressed in a tunic like the men, because of nothing but her sex, reminded me suddenly of Elaine. I paused, and dropped unsteadily into a chair. The memory was too overwhelming for me at that moment.

For the first time that afternoon, I understood what a limited mechanism the human mind must be. Perhaps, fortunately, there are situations which, as ideas, affect powerfully a man's emotions; but when he finds himself involved in them as experiences they press down quietly on his mind, and he is unable to comprehend them. Certain changes, certain losses, are so transmuting and great that they leave only a vacancy behind them, a feeble stirring of unrecognized despair.

I ate my meal calmly while the others talked. At first I tried to find some mental perspective in which to view what had happened to me, but that was impossible. Through the lethargy that possessed my faculties, I understood nothing, except that I had outlived my time by centuries—that Weber was dead, and that he had never found, after all, the method for which he was searching. I had lain suspended between life and death, while the world changed utterly. This world was profoundly different from mine in its very bases: although we spoke the same language, Istal and I could not converse because of some unbridged chasm between our minds.

When I had finished, I leaned back in my chair, fumbling unconsciously in imaginary pockets for a cigarette.

"What is it you want, my son?" Istal's father asked me. I answered in confusion. "Why—I was looking for a cigarette."

He said, "What is a cigarette?"

"A white tube of paper filled with tobacco. Don't you ever smoke tobacco here?"

Lasti shook his head.

"No. I think I have read somewhere of tobacco. But I have never seen it."

I followed for a few moments a vagrant idea—if I must live among these people, would I be able to cultivate tobacco on their soil? Istal roused me with a remark.

"My father," he said, "is a wise man. I am not wise, and I could not answer any of your questions. But my father may understand them."

Lasti nodded.

"Ask me what you like, my son. Perhaps I can help you a little."

I looked at Lasti eagerly, and said, "Can you tell me what year it is, then—how long I have been dead?"

Lasti pondered for awhile, and answered finally:

"My son, you speak of something which is unknown to me. You speak of time and of years. There are a few philosophers among us who have studied what time is, and none of them has agreed whether it exists or whether it was a notion peculiar to the ancients. When I was younger, I read some of the books of the ancients: they spoke continually of time. The words which we now use, that have no metaphysical significance, they used as a sort of measure, whereby they thought they could attach themselves to the dead, to that which is gone and done with. But the dead are dead, and they exist no more. We do not understand any difference between things that are dead; we do not understand what you mean when you speak of time."

I said, "Do you not count the days, the months, and the years?"

"We do not count them. Perhaps today you are in Cairo; perhaps you are in Assouan tomorrow. When both these days are behind us, does it matter which day found you in Cairo and which in Assouan? The days go on, one after another, and they are not in themselves very different from each other. We remember the things we have done; but does it matter on what day we have done them?"

"Surely, sir," I protested, "you must measure the hours of the day? If not, how could you keep a meeting in any distant place?"

"We keep the hours, my son; but is that time? What, then, do you call time? The earth moves about the sun, and that is a physical movement through space. Perhaps I am to meet you in Cairo at the fourth hour of the day. Before that hour a hundred things may happen to me while you are performing one act, but the sun will be in a certain portion of the sky, when I come to Cairo and in the same place when you arrive there. If that is what you call time, I do not understand it."

"But if your machines and clocks," I said, "move as the sun moves, an equal distance while you are living your hundred acts and I my one, doesn't that prove the time is measured rightly?"

"How, my son? It proves that the nature of ma-

chines is to move in a certain way, as it is the nature of the earth to move through space; and we can learn, if we wish, to move our bodies with the machines. But time, I thought, was something more than that." He shook his head gravely. "It is a strange subject my son. We cannot hope to understand it, if our philosophers cannot agree."

"And your crops," I said, "can you know when to gather them, without counting the days?"

Lasti smiled.

"They are gathered by the machines," he said, "and the machines know."

"Who sets the machines?"

"Sets them? The machines need nothing but their oil, and sometimes their repairs. If they are broken, we repair them with other machines. We have always had the machines. We do not quite understand them," he added, with a puzzled frown, "but they work for us—they are very good machines."

I considered helplessly awhile, wondering how I could find myself in time, and whether, after all, it mattered.

"Have you no histories?" I asked. "Do you not study the ancient civilizations, and ask yourselves when they flourished?"

"We have books about the dead times," Lasti said. "We read them. Perhaps they are fairy tales, perhaps they are true—it doesn't matter, if they are pleasing. Here we are," he said, "—those others exist no longer, any more than the countries on the moon, of which we also read in old books, or the people at the earth's core. Why should we care, if they amuse us? How can we measure the truth of those things which do not exist, or measure the distance between them?"

"They did exist," I said.

"Perhaps. But we have no memories of them."

I HAD a vision in that moment, of these people ending the career of man on earth. I think that for an instant I understood them. They had their machines, their knowledge of the physical properties of the universe. Perhaps, like the Greeks, they had clean and clear minds; but they had no understanding of time. Their life, without perspectives, was perfected and simple. They lived for the moment, and for the pleasures of life. Their civilization might endure for years or for thousands of years without change, until an unforeseen catastrophe ended it. Deprived of hardship and struggle, they had lost the deep, bewildered curiosity of my people; and their attitude, although it was alien to me, had even then a certain fascination, a certain sublimity.

After awhile, I said: "Lasti, if I should tell you about one of those old civilizations—the one in which I was born—would you be interested?"

"Surely," Lasti said. "I am always pleased by these tales. You shall tell me one day; and I will tell you the things of which I have read."

He was incurious.

Later, when the afternoon was nearly over, I asked Lasti to tell me something about the world as I would find it hereafter.

"The world," he said, "is a very interesting place, if you care to study it. Some day, if you like, we shall travel together. I will show you the people who live on the other side of the world. They have some curious customs and strange machines. Perhaps, even, you would find them interested in time, as you are."

"You see little of them?"

"We seldom leave the country where we are born," Lasti said. "We have all that we need here. Sometimes, if we are studying, or for curiosity, we travel. I have traveled a little. I spent a few months once in the North."

"The North," I said. "I wanted to ask you about the North. Is there still a nation called the United States? Does New York still exist?"

Lasti shook his head.

"I have never heard of them," he said. "There is nothing in the North. It is cold and barren, like the far South. There are a few barbarous natives living among the ruins of old cities. The rest is ice and snow, when you go very far beyond the Sea of Cairo and the Mexican Sea."

I nodded somberly, and said: "There are glaciers, I suppose? The earth must be very old now."

"Were you ever in the North?" Lasti said.

"I was born there, in a place called Virginia. It was hundreds of miles north of Mexico."

"It would be almost deserted now."

"Of course. We loved it very much. . . ."

The sun had set. A strange, penetrating crimson glow lingered in the sky, more disturbing than any sunset I had ever seen.

"We must go in, Father," Istal said, "before the cold comes down into our own garden."

Lasti nodded. We all rose and wandered back toward the house.

I turned to Istal, and said: "Tell me, sir—why did you trouble to wake me? Surely it meant nothing to you that I had lived among the ancients? It was not curiosity?"

"I saw you there one day," Istal said, "when I was walking among the ruins, and dreaming. I found you by accident. So I took Dras to see you, and Dras is curious about these things. We thought that you might care to be alive again. We brought the machines down from Cairo. Soon, maybe, we shall wake the other man who sleeps across from you."

"Another man?"

"He is different from you—his skin is dark, and his nose curves, like this. . . ." It was not Weber; it was the ancient king.

"You did it for pleasure?" I said. "It was a sort of lark?"

Istal shrugged, smiling.

"We thought you would not have been there," he said, "unless you meant to wake again some day."

I walked for a moment in silence. Then I said: "And the other temple—the third? Who sleeps there?"

"The other temple is empty," Istal said.

Elaine? . . .

CHAPTER V

A Tomb in the North

IN the morning, when I rose and put on another of the clean white tunics, I went down into the garden and found Talis, the sister of Istal.

"Good morning," she said, smiling at me in the sunlight. She was having her breakfast on the table under the trees.

"Good morning," I said.

She beckoned me to a chair, and said: "Will you have some breakfast?"

"Thanks." I sat down by her, and she gave me breakfast from a silver dish on the table.

I was troubled about Istal's hospitality. I didn't know whether he cared to have me long as his guest, or whether he could afford it. I knew nothing of the economic conditions of this civilization. In any case, I was anxious to be independent, to find some work I could do in order to live. I wondered whether I should

find any work left in the world that I was able to do.

"What do people do here all day, Talis?" I asked the girl. "How do they spend their time?"

"We amuse ourselves," she said, smiling still. "Sometimes we read, sometimes we walk among the fields and gardens, or fly about the country. Are you bored so soon?"

"Oh, no! But I wasn't used to idleness in my world. We were always doing things, working. That is how we managed to live. Is there no work here?"

"A few people work," Talis said, a faint note of scorn for them in her voice, "when they can't amuse themselves."

"But how do people make money?" I asked. "Where do they get food?"

She looked at me in astonishment.

"I've never heard of money. And as for food—why, there's food everywhere. That's what the machines are for. They make food and clothes and houses." She said incredulously, "People don't have to do those things."

"You see," I explained slowly, "I wanted to know whether I couldn't do something for myself. I can't live on your brother's hospitality."

"I don't know what you mean," Talis said, with a questioning look. "If you don't like my brother—"

"Of course I like him!"

"If you don't want to live here with us, there are other houses. You can go wherever you please."

"I don't want to go," I said hastily. She watched me with inquisitive eyes, as if I were a strange creature of some sort.

Finally she said: "I wish you would say things I could understand. Are you lonely here?"

I reddened.

"No," I said, "not that, exactly. But I'd like to have my people with me, too."

"We like you," Talis said. "We'll all be kind to you. If you want to, you can be my lover."

"Thanks—that is very kind of you," I said, smiling in an embarrassed fashion.

Talis laughed, and said: "You're nice."

"The trouble is," I added soberly, "that I was in love with a girl before my—death. It's hard to forget about her."

"Oh, I'm sorry," Talis said. "But she's dead now, isn't she?"

"Yes."

"Were you very fond of her?" Her voice was kind and sympathetic, as if she spoke to a child. "What was her name?"

"Her name was Elaine."

"That's a good name." Talis thought about the name for awhile. "I've heard of a name like that somewhere."

"Have you?" I had a vague and fantastic suspicion, for just a moment, that she might have known Elaine. Then I smiled at myself, somewhat bitterly.

"I read it in a book once," Talis said.

Puzzled, I asked: "An old book?"

"I don't know—it's a book of my brother's. Maybe I could show it to you."

Still troubled with that curious intuitive suspicion, I said: "I'd like to see it."

Talis stood up.

"I'll find it for you," she said. "I think I know where it is."

She went toward the house. Again, as I had done the night before, I fumbled intently at the sides of my tunic, looking for a cigarette. I remembered that there were no cigarettes any more. Half eager, half listless, I waited for Talis.

After awhile she came back, a book in her hands. She held it open, turning the leaves as she approached. I stood up, trembling, and watched her eagerly and with impatience.

"This is it," she said. "It's a book about the North. Here—"

She held it out, and I seized it awkwardly

The book was called *Wonders of the North*. It was like the books I had always known, except that the binding was metal, and the pages were thin sheets that might also have been metal. The letters were faintly exotic.

The passage Talis pointed out to me read:

> Among these ruins is a building of white stone that stands on a hill. The savages worship it. They have a legend that their Queen is buried there, and that she will some day rise from the dead, shattering the heavy walls, and come forth again bringing with her the secret of making their country warm. There is no door into this tomb. The walls are smooth and spotless everywhere, except on one side where there is an inscription in tall letters,
>
> THE TOMB OF ELAINE
>
> and the building rests on solid rock. It is a silent and mysterious place. . . .

I stared for awhile at the page. There was no more about the tomb. The author went on to describe ruined cities and the curious customs of the savages. In the one paragraph that had any significance for me lay a hint so feeble and remote that it was almost madness to follow it. Yet there was a pointed atmosphere about the matter, as if it had been intended by a beneficent god for my eyes, as if I had been expected to read a meaning between the lines.

I gave the book back, while Talis watched me curiously.

"What is it?" she asked solicitously, seeing my agitation.

I said: "It might be the same Elaine."

"Was your Elaine a queen?"

"She could have become a queen," I said, "and I should not have known the difference."

Istal and his father came toward us from the house.

"You have had breakfast?" Istal said. I nodded, my mind still on the book. Lasti noticed my excitement, and he said: "What is it, my son? Has the little Talis upset you?"

"No, sir. It's a book I have been examining—"

"About the North?"

"Yes. There is something in the North I must go to see."

Talis said, patting me on the arm: "It's his girl, father. He thinks she is buried there."

"But if she is dead, my son—?" Lasti asked.

"She may have been left half dead, as I was left. And, even if she *is* dead, I should want to see her."

Lasti nodded.

"Then you must go," he said.

"It will be a long journey," Istal said, "and you will be very cold."

"I shall stand the cold," I answered. "When I lived before, there were long, cold winters through which we always managed to survive. It can't be much colder than that."

Lasti said: "You will see, my son."

They sat down to their breakfast, and I wandered away through the garden with Talis.

CHAPTER VI

Elaine

I FLEW westward in a closed ship. I left one morning, circling over Istal's house while the family waved goodbye, and I headed for what had been the Canary Islands. Dras had taught me to pilot the narrow, graceful machine. It was easy to handle. Dras had found me another of the instruments with which he had given life back to my body, and taught me how to use it. The ship was stored with heavy clothes and with food. I carried maps and compasses and books.

During the day, there was no excitement in the trip. Underneath lay always the same miles of cultivated land—fields, woods, canals—that I had seen before. There was a certain exhilaration in the mere feeling of lightness and grace that the ship lent me, and in the whistling of the wind along its sides.

The craft made, for these times, no great speed. I made an average of about three hundred miles an hour. It was five o'clock by the chronometer on the ship when I came to the Canaries; by the solar chronometer (which adjusted itself by the sun wherever I went) the time was about three. I continued a westerly course, a little to the south, that would bring me to Mexico City by the following afternoon.

A profound peace and stillness lay around me. The sea was calm, moving in long, slow swells under the ship. The sun had overtaken me—it dipped slowly down the sky over the unbroken horizon ahead.

Night came. The sun went down, large, vague and red among low clouds and mist. My cabin became a tiny cubicle of light in the mystery of endless darkness. My instruments guided me. After awhile, I turned off my lights, leaving only the dim glitter of the luminous dials, and watched the stars swinging down the sky overhead. Faint lines of phosphorescence moved like ghosts on the water, and the rising wind reminded me of lonely winter nights in my boyhood, when I had lain awake in dark rooms, hearing the wind whistling around house corners and rattling the cold window-panes.

There was a storm some time before midnight. It grew rapidly in intensity for nearly an hour. While it lasted, the sea twisted and struggled under me in high waves whipped by the wind; dark masses of cloud obscured the stars; and foam spattered thinly from time to time across the windows of my cabin. But the ship rode securely, unanswerable to the storm. The wind and the sea went down rapidly. The clouds drifted away, and the stars appeared again.

It was still dark when I came in sight of Cuba, a low, dark mass looming up along the horizon. By the chronometer it was after nine in the morning—I had been gone about twenty-five hours—but it was hardly three by the invisible sun. I had five more hours to go.

An hour before dawn, the moon appeared suddenly behind a jagged rent in the clouds along the horizon. A pale silver light spread over the water, diluting the sky with gray as dawn approached. Just as the sun snapped a long, brilliant cord of red over the sea behind me, I saw the coast of Mexico. I crossed above a long beach of white sand, and approached Mexico City over fields that were much like the fields I had left behind me in Africa. There were fewer houses here, but the buildings were immensely large, like compact, miniature towns set in the midst of long miles of field. These gave way again to the waters of the Gulf of Campeche, and finally the coast appeared once more.

Half an hour later Mexico City, a glittering mass of blue, metallic towers, rose up before me. I made for a tall building in the center of the city. Dras had described it to me—it was the Tower of Science. I lowered my ship gently to its roof, and stepped out. A small group of men stood negligently at the roof's edge, leaning on a balustrade and watching the glitter of the sun on a white, snow-capped peak in the distance. I accosted them.

"Gentlemen," I said. They turned. "Are you the members of the Science Club?"

They nodded gravely. They wore the simple, child-like air that Greek philosophers must have worn. They were not such scientists as the people of my time had been. Science was their hobby; they studied it for the pleasure it gave them. There were no more scientists of Charles Weber's sort left in the world.

"I am traveling toward the North," I told them. "I have learned about an old building there that I want to see. I thought perhaps you could give me some directions."

A little surprised, but without incredulity, one of them said:

"There are many strange things in the North, my friend. I went there once, as far as I could safely go. What is it that you want to find?"

I showed him Istal's book, *Wonders of the North.*

"Have you ever read this?" I said.

"My father wrote it. My family has always been curious about those barbaric places."

"There is a passage here," I said, opening the book at the page I had marked. "I wonder if you have ever seen this building?"

He took the volume, and read the paragraph slowly, frowning a little. When he had finished, he thought awhile, glancing up at the sky. Finally he handed the book back, and said:

"I have seen the place, but I don't recall where it is. Perhaps I could find more about it from my books."

"Would you be so kind?"

"Why not?" he said. "It's an interesting place, that tomb, and I have often wondered about it myself. Have you learned something about it?"

"Nothing yet, sir," I said.

"It has always been a temptation to me to open it. . . . Well, come to breakfast with me, and I will look through my books."

I BREAKFASTED with Kivro, the scientist. We piled hundreds of volumes on the floor about the table and searched their pages while we ate. They were remarkable books, all describing the marvelous people, country, and legends of the North. But all of them, like the book I had brought with me, were vague about the details that a true scientist would have fixed first. They neglected to describe the location of the places they mentioned, and they were careless about all matters of chronology. Many of them contradicted each other.

In the end, after hours of searching, we found what I wanted. In one small book there was a footnote, in small type, buried near the end of a chapter about one of the places Kivro had visited.

> Near this town (the footnote read) stands the Tomb of Elaine, about which many travelers have written. It can be seen clearly from the ruins of the central square, nearly hidden by the trees and the broken walls.

"Of course!" Kivro exclaimed. "I remember the town now—a vast, ruined place, which the natives called Shika. It is remarkable for the little group of ever-

greens about the hill where the tomb stands. The natives live among the old walls at the foot of the hill."

I rubbed my tired eyes with a gesture of relief.

"Thank God," I said. Kivro glanced at me curiously.

"You are very eager to know?" he said.

"Very eager. If I find what I am looking for, when I come back, I will show you why it is so important to me."

Kivro nodded, and I thanked him hastily. Refusing his offer of a place to rest, I went back to the roof, shook his hand gratefully, and climbed into my ship. When I rose this time, the city flashing under me in the sunlight, I turned almost back on my former course, heading north and east, this time, toward the Gulf of Mexico. It was surprising how rapidly the cold increased. Long before I reached Louisiana, the air had begun to grow chilly. I shivered in my slight tunic, and finally turned on the heat in the cabin. Near sunset I came to the small town that stood on the site of Baton Rouge. A light fall of snow was on the ground. I descended there, without disturbing the inhabitants, and slept a few miles away, in my ship. I was very tired.

All the next afternoon, after resting until ten o'clock in the morning, I followed the Mississippi northward. Shika, the town for which I was searching, was the native name for what remained of Chicago. It would not be difficult to find. The cold, however, had a definite effect on the mechanism of the ship, cutting down its speed more and more as I went on. It took me seven hours to reach Chicago.

I had put on the heavy clothes, but in spite of them I was cold. The heat in my cabin decreased proportionately with the ship's speed. I was glad that I had more resistance to cold weather than Istal and his people, but even for me the discomfort was difficult to endure.

All along my route, now, the earth was covered first with snow and later with sheets of ice. The wind was vicious during the afternoon, and from time to time there were flurries of thick snow through which my instruments had to guide me. The country, when I could see it, was unrecognizable. The centuries and ages during which I had been dead had changed the contours of the earth. The ice lay over everything, sweeping down in long glaciers from the hills to the banks of the river. Even the river, further north, was frozen solid.

I branched off from the Mississippi late in the afternoon, and followed the Illinois. Once there had been a canal from Joliet to Chicago, forty miles away, but there remained no trace either of the canal or of the city. I left the river and headed northeast toward Chicago. Just before the day ended, the blinding, low rays of the sun pointed it out.

Very little remained of Chicago. Most of the buildings had crumbled away long ago under the grinding weight of the ice. Here and there, perched grotesquely on the hills, stood isolated groups of walls, deep in snow. I had never before been to Chicago, but I had never thought of it as a hilly city. There were hills now. The ice had created them, or perhaps some previous ice age had created them—I had no way of knowing. They were there.

I found immediately the hill for which I was searching. It overtopped all the others, regular and rounded like an artificial hill. On its southern side, sheltered in a sort of natural amphitheatre from the wind, grew most of the bleak trees of which Kivro had spoken. Here, too, built against the jagged shelter of broken walls, stood rude, cave-like huts of stone and ice. Thin lines of smoke drifted up from them until, caught suddenly in the wind, they lifted and disappeared in the gray air.

Where the natives lived seemed a logical place to land my ship. I brought it down in a small open space among the huts. Snow had begun to fall again in thick gusts, blotting out the last of the twilight. I had seen no natives yet—they were all within their huts, apparently, for the night. I thought longingly of their warm fires and suppers, but I hesitated to reveal myself. I was uncertain how I should be received; and I hated the thought, when I was so tired, of having to make interminable explanations. I could endure my cabin. I satisfied myself with the food I had brought, and, muffled in heavy clothes, lay down to sleep in the cabin. I slept fitfully during the night, thinking numbly of Elaine and of my fantastic surroundings.

As soon as dawn came, I was awake. The snow had stopped falling, and none of the natives were about yet. In spite of the smoke from their huts, I half doubted whether any natives existed. So much was fantastic and unreal in my life during those weeks that I had lost my standard of values in realities; sometimes I believed in the impossible, and more often I doubted the truth. Nothing was real, nothing was false—I lived in a state of continual bewilderment, through which I moved mechanically, directed only by the obscure habits of my past life.

Wincing at the contact of unbelievably cold air, I pushed open the door of my cabin and stepped out. The instruments I would need were not heavy. I lifted them out beside me, in two metal cases, and locked the door. Buckled to my belt was the long tube, like a flashlight, that would disintegrate the walls of the tomb.

I moved quietly through the snow toward the trees, past the native houses. The snow was deep, but heavily packed. I struggled slowly up the hill until I reached the trees. There the path was easier. I minded the cold less, now that I was exposed to it; it was bracing, in a way, and my activity rendered it bearable.

It took a long while to climb the hill, but finally I reached the top. A blast of cold wind swooped down on me at the summit, but I ducked under the shelter of the tomb, where the tall letters, cut deep into the stone, told me that Elaine—some Elaine—was buried here.

Removing the metal tube from my belt with awkward fingers, I pushed the button that turned on its power. I had to handle it carefully—it was a dangerous machine. It cut into the walls with an invisible ray, grinding them to a fine dust as if they had been attacked by a chisel. In about ten minutes I had made a circular opening large enough for my body to pass through. I leaped aside as the heavy portion of the wall I had cut out broke away and rolled heavily into the snow.

I lifted the instruments through first, and followed them hastily. I found myself in a small room, lit dimly by the opening in the wall. The room appeared to be bare. I examined the walls and the floor; there were various inscriptions on the wall, but it was too dark to read them. A metal ring in one of the inner walls disclosed a door. I tugged at it, and after a moment of resistance it came reluctantly open, on rusty hinges.

TOO excited and too numb from the cold to care for any precautions, I stepped through into another room which sounded, by the echo of my movements, larger than the first. Here the darkness was profound. Again I explored with my fingers. This time I discovered a number of large metal boxes, none of them large enough, however, to be Elaine's coffin. The room contained nothing else.

Cursing myself for not having thought to bring a light, I examined the wall on either side of the door through which I had come. There should be at least two small rooms adjoining the antechamber I had first entered. But the walls seemed to be blank.

Disappointed, I felt my way nervously back to the metal boxes. I felt several of them thoroughly with my fingers, and they were apparently sealed. I was afraid to use my disintegrating tube—I might injure their contents. Nervously, I seated myself on the cold floor and wondered what to do.

It is possible that I was not quite rational at that moment. I had worked so far with the mechanical ingenuity of a robot or a madman. The intense cold and the strangeness of the whole adventure had deadened my faculties. I felt very little true emotion just then—indeed, I had been stunned beyond a capacity for emotion, ever since my awakening.

In any case, I think that I must have lost consciousness briefly. Dozens of faint dreams and impressions floated before my eyes in a condition between fantasy and reality. Suddenly, however, I found myself recalling the moment when Weber and I had first penetrated into the tomb of Tomen-Ashto. Clearly, and with a sort of startled fixity, I saw Weber push at the wall in the subterranean room, and saw the wall yield and turn on its hidden hinges. I was aware of a feeling of compulsion in this picture, as if someone had held it before me and said:

"Look!"

I stood up, a little weak, and groped my way back to the wall beside the door. Raising my arms, I pushed vigorously against it in all directions, but without success. Then I crossed to the other side of the door, and tried the wall there. After a moment, it seemed to stir gently beneath my fingers. I pushed harder, and it yielded. The wall swung inward, like a door.

And suddenly, as it opened, I jumped back with a startled cry. The whole room had burst into a blaze of light, and a light came through the door from the room beyond, blinding my eyes after the intense darkness. Frightened, as if by an invisible presence, I crouched back against the wall and stared about me. The stillness was unbroken. Nobody appeared; nothing happened.

I grew accustomed to the light, and my nerves became quiet again. I knew now that I should find Elaine. This was not an ordinary tomb. I was too confused to question the lights, or to wonder how they had survived the passage of innumerable centuries; but I knew that they had not been left here merely to divert intruders. Nor were they for the use of the dead.

With a brief glance about the room, I turned my attention again to the door I had just opened. It came down to the floor, unlike the door in Tomen-Ashto's tomb, and it gave upon a stairway leading down under the floor. There was a warm current of air rising through the doorway.

I went to the antechamber and found my instruments. Then, shutting the two doors behind me against the cold outside, I came back to the stairway and descended. It was not a long stairway. It led to a room directly under the first floor of the tomb. As I entered this room, I gasped with surprise, and stood transfixed, staring into it.

It was a low, warm chamber, decorated with wood and plaster like the rooms I had known before my death. The wood seemed oddly fragile, as if it would crumble under my touch, and I was afraid to disturb it. There were chairs, tables, and all the other furnishings of a bedroom. The cloth covers of the chairs had long ago become tattered and crumbled into dust, leaving the bare wood and the springs exposed; and the rug on the floor fell apart, rising in fine particles of dust about my feet, wherever I touched it. But the combs and brushes, the bottles and boxes and jars, still remained intact on the dressing table.

There was an old iron bed in the corner. Elaine lay there.

I crossed the room slowly, and looked down at her. The bedclothes and her gown, like the covers of the chairs, were dust. She lay there, beautiful and immobile, as if suspended between life and death. Her eyes were closed. She lay with her hands at her side, quiet and calm, a girl composed for rest. The centuries had not changed her. A faint, mysterious smile rested on her lips.

"Elaine," I said wonderingly, lost in the miracle of my love and of her life. I dropped on my knees beside her bed, and rested my head wearily on my arms. I think that I cried. I was afraid to touch her body.

CHAPTER VII

The Little Men of Shika

WHEN the little hand on the dial reached ninety-eight, I turned off the switch and waited. Under the furs that I had thrown over her, I thought I saw Elaine move slightly. I bent down and touched her cheek with trembling fingers; it was warm again, and flushed with a soft color.

Her eyelids fluttered. I knelt beside her again, removing the metal bands from her wrists and from her ankles. Her eyes opened a little, and glanced at me gravely. Her lips lifted in a brief smile.

"Mr. Frazer. . . ." she murmured.

"Elaine!"

She examined my face with languid attentiveness, and asked: "Are we all right?"

"All right, Elaine," I said.

"What time is it, Mr. Frazer?"

I didn't know. I had no watch—only the chronometers on the ship. And it was ironic that, at the end of so many centuries, Elaine should ask first for the time. But I said carelessly: "Eleven o'clock."

She closed her eyes awhile, and frowned slightly, thinking.

"Do you feel better?" I said.

"Yes, sir. But—" She opened her eyes again suddenly—wide. "Why," she said, "where are we?"

I didn't know how to tell her.

"Don't you know, Elaine?" I asked.

"I think—" She was puzzled. "I thought you were—" And then her memory wakened. She raised herself a little and stared at me.

"Alan!" she said.

I smiled at her (she had called me by my name!), and took her in my arms, trembling.

"Why, that's all right, Elaine," I said. "Weber was right."

She glanced all about the room, and then back at my face.

"But this place," she said. "Has it been long?"

"It's been a long time."

"How long, Alan?"

"Years," I said. "You'll see."

She closed her eyes, and rested in my arms. With my hand I smoothed the hair on her forehead. She said, glancing at my eyes, "You love me?"

"Yes."

I kissed her lips gently.

I said: "Elaine. What happened? How did you get here?"

"Charles Weber told me about your death. I loved you, too."

"You did? All the time?"

"Yes. And when he told me, I made him promise to leave me here with you."

"Here?"

"Yes. And then I—did this." She pointed out to me a scar on her wrist.

"Honey!"

"That wasn't very hard. I was afraid I might grow old and—ugly, while you were sleeping."

After awhile, I said: "But, Elaine, we're in Chicago now. And Weber left me in Egypt."

"In Chicago?"

"Yes. Who brought you here? And what happened to Weber?"

"I don't know. Isn't Weber here?" Elaine said. "Didn't he wake you?"

"Weber's dead. He died a long time ago. All the people we knew are dead, Elaine."

A look of fear came into her eyes. She stared at me. "What do you mean, Alan? What year is it?"

"I don't know, honey. Everything has changed—it's been a long time."

Slowly she said: "And Weber didn't wake you up?"

"Weber is dead. Strange people woke me up, and you weren't there. But I looked for you, and found this place."

"How did you know?"

"I didn't. I had to guess."

Elaine lifted her hands and touched my hair.

"I'm glad," she said.

"We'll be happy, Elaine. Together."

"Yes."

Her body stirred restlessly under the covers. She said: "Shall I get up now, and come with you?"

"Are you strong enough?"

"I'm well now. I can go anywhere."

"You must take those clothes of mine. Your clothes are gone."

Elaine smiled, and said: "I won't need so much."

"It's cold, Elaine. You'll need them." I took off the heavy shoes I had worn to the tomb. "Take these, too. There's snow on the ground."

"But Alan! What'll you do?"

I smiled, shivering a little in my light tunic.

"I'll be all right," I said. "It isn't far to the ship."

I kissed her again, and rose. I left the instruments where they were. They would be in the way if I carried them.

"I'll wait for you upstairs, Elaine," I said.

. . . She came very soon, wrapped ponderously in the awkward clothes I had given her.

"Do I look all right?" she said.

"You look beautiful."

I CLOSED the door behind her. Immediately the lights flashed off. They had been growing dim. I wondered absently how they had been contrived, and how they had been able to survive the centuries; but it was one of the forgotten things we should never learn to know.

"Come," I said, "maybe we'd better hurry, honey."

"Are we going somewhere?"

"We're going home. There are strange people here. We're going back to Egypt—that's our home now." I led her, in the darkness, to the antechamber, where the gaping hole I had made in the wall revealed the waste of snow and ice outside. Elaine gasped with surprise when she saw the bare, deserted hillside, with its lonely evergreens towering against the sky.

"Where are we, Alan?" she cried.

"Chicago," I said shivering painfully in the cold air. "At least, it was Chicago once."

Without saying any more, I helped her through the wall and followed hastily, leaping with a shock down into the snow. The snow burned my bare feet like a blanket of white fire.

"We'll have to hurry," I panted. "I can't stand much of this."

We ran down the hill-side, sliding and stumbling through the snow. My tunic was no protection against the cold. I was afraid to pause; I waved my arms and legs wildly to keep the circulation going.

We burst out of the woods, into the little gathering of huts. I saw the ship lying black and immobile against the snow in the clearing. A crowd of little stunted, dwarf-like figures was gathered around it. They heard the sound of our thrashing in the snow, and turned. For a few moments they stood transfixed, while we approached. Then they fell back a few steps beyond the ship. One of them waited at its door.

We reached the ship. The little man who had waited stood by helplessly while I unlocked the door. As I was about to open it, however, he laid his hand on my arm.

"What are you doing?" he asked in a strange dialect, but in English, "Who are you?"

I paused a moment, wondering what to tell him, and saw the rest of the little people watching us a few yards away.

"I've come from the South," I said. "Now I must go back."

"And the woman," he insisted, "who is she? Where did you find her?"

I said impatiently, without thinking:

"I found her up on the hill. That's what I came for, and now I've got to go."

But the little man startled me with a loud cry.

"The Queen!" he shouted. "She is the Queen!"

Elaine and I looked at him in surprise, and then at the others. I remembered now the old legend in Istal's book, that Elaine would some day rise and come forth out of her tomb to rule over the natives. All the little people had fallen on their faces, prostrating themselves in the snow. The man by the door knelt in front of Elaine.

"Our Queen!" he said breathlessly. "You have come back to us. I am your priest. You have come to give us back the Great Fire."

Elaine touched his head, muffled in heavy fur, with a gesture of pity. I shivered, stamping my frozen feet in the snow.

"Poor fellow," Elaine said, "he really believes I am his queen."

"I know," I said with difficulty, "but on the other hand, I'm nearly frozen. We haven't time to explain things to him." Elaine nodded and smiled. "Jump in," I added, pulling open the door, "and I'll follow you."

Elaine climbed into the cabin, resting on my arm. I unbuckled the disintegrating tube from my belt.

"Wait," the little priest cried in a frightened voice, "you can't!" He turned to the other little men. "He's carrying away the Queen!"

He moved as if to leap upon me, but I pressed the button of the tube, pointing it at the ground between us. The snow melted with a hissing sound under his feet, and steam rose about his legs. He leaped back with another cry.

"You can't stop me," I said. "Maybe, before long, we'll come back again. But we've got to go now."

"No! She's our Queen!" the little man insisted, frightened and unbelieving. "You can't carry her away."

"I'm sorry," I said, turning toward the door.

Suddenly, his hands before his face, in fear and desperation, the priest leaped at me with a cry. I glanced quickly at the others. They were standing back, afraid to move.

I didn't want to hurt the little man. I had meant to use the tube, but it was a sickening weapon—I was afraid of it myself. While I hesitated, the priest bore down on me and seized my arm, twisting it madly upward. He was amazingly strong. Before I understood what was happening, the tube had fallen from my hand. I heard Elaine crying:

"Quick, Alan! Hurry!"

With all my strength, I crashed my free fist into the priest's face. His grip loosened, and he fell back into the snow. The other little men were running toward us.

Leaping into the cabin, I slammed the door behind me and pressed the rising button. The ship rose sluggishly, and one of the little men, clinging to the side, fell back in the snow. I sank into my chair, weak with cold and exhaustion. Elaine threw her arms about me.

"Alan!" she said. "Are you all right? Can you guide the ship?"

I nodded, and pointed to the rear of the cabin.

"There are more clothes back there," I panted. "Get them for me."

Rousing myself, I leaned forward and moved the controls. The ship moved ahead, swinging west and south toward the Illinois river. Then I glanced down at the village we were leaving. The little men stood in a dejected group, staring after us with sorrowful faces. The priest was bending over, picking up some small object from the snow. While I watched, he examined it carefully, made a motion with his hands, and lifted it. It was the disintegrating tube. He pointed it at us from the ground. I could not see the ray.

I must explain the tube I had carried. It was small and comparatively weak. Designed originally for use as a weapon, it was powerful enough to cut through stone and metal—not suddenly and cleanly, like a knife, but gradually, like a chisel. Its chief virtue was its great range and its narrow, concentrated ray.

The priest was not adept with it. And, too, the ship by that time was hardly a good target. After a few minutes, during which the priest waved the tube clumsily in ragged circles, I heard a soft, searing sound along the bottom of the ship. It lasted a moment, then it went away. After awhile it came back. For some minutes, while we left the village further and further behind, I heard the sound. Finally it ceased.

I had no way of judging whether the tube had damaged the ship materially. The bottom was made of a strong metal, but I was unfamiliar with its design. The ship went on moving forward.

Elaine brought me the clothes, and I put them on. It was getting dark outside, and beginning to snow again. I didn't turn on the lights or the heat; I wanted the ship to use all its power in taking us south as soon as possible. Already the cold and the darkness of the North were wearing on my nerves. Elaine sat in my chair, and I sat beside her on the floor, my arms about her and my head resting on her knees. I was very tired, but I had begun to recover somewhat from my recent exposure.

IT must have been well over an hour before Elaine or I moved, except once, when we came to the Illinois and I changed the course. We had said nothing, but waited in silence, content to be together. The snow increased until it was swirling violently about the windows, obscuring all trace of the earth. We were nearly in darkness, in a sort of long twilight, and pondering on the things we should do together.

There was, suddenly, a sort of grinding sound along the bottom of the ship. We both stiffened, listening. It came again. I jumped up, and glanced at the instrument board. Our height was fixed by the automatic stabilizer at a hundred feet. That meant that we should be following the contour of the country (and Illinois was a flat country), rising and falling with it at a continual mean level of a hundred feet above its general outlines.

The sound went away. My heart beating violently, I raised the ship another hundred feet, and fixed it there. We had no instrument for measuring the actual height. The stabilizer was not expected to fail. I peered out through the windows at the snow, trying to penetrate it. I could see nothing.

"Are we all right, do you think?" Elaine said.

"I don't know, honey. I suppose so."

We listened anxiously. Nothing happened for, perhaps, twenty minutes. Then the scraping began again, very slowly and sluggishly. I looked at the speedometer. Our speed had decreased until the finger on the dial stood almost at zero. I was perplexed. I glanced through the windows again, and at that moment the snow lifted for a brief instant, and I saw the earth. We were barely creeping along, almost on the surface of the ice.

"Elaine!" I said. "Something *has* happened!"

"What is it?"

"The power must be going dead."

We looked at each other silently. There was nothing to be done.

Within another ten minutes the ship had come to rest on the ice. I knew nothing about its mechanism. An attempt to repair it would be useless. The priest had managed somehow to damage it with my disintegrating tube.

For a long while we waited in the twilight of the cabin, wondering what we could do. Gradually the storm cleared away again. It was late in the afternoon. I said finally:

"There used to be towns and cities along this river, everywhere south of Chicago, Elaine. There were hundreds of them." Elaine looked at me, her eyes deep and mysterious as I loved to see them.

"Yes?" she said.

"Do you suppose we could reach one of them on foot?" There are a few natives in all those cities, living among the ruins. And the storm has cleared."

"Do you want to try?" Elaine said.

"It might be better than sitting here, waiting for our food to give out. Nobody will come for us. We could be doing something."

"I'll go with you," Elaine said. I kissed her quickly, forebodingly. "Of course, we won't make it," she said.

"Of course not," I rejoined.

I pushed open the cabin door. Our pockets were filled with concentrated food. I leaped down. We rested on the ice-covered surface of the river, by good fortune. The snow was not very deep—most of it had blown up into great drifts along the banks. I helped Elaine out.

We said nothing more. In a situation of that sort, what could there be to say that we didn't understand already? Words could only burlesque our deep consciousness of love, and our willingness to die so long as we were together. For, even if that is a foolish and romantic notion, when a man and a woman have to die, they can do it somewhat more easily if they carry such an illusion with them.

Darkness came soon enough. The sky cleared for a little while just after sunset. The stars came out. Later on, there was a frigid, pale moon hanging over the low hills. We stumbled along through the dark,

walking with difficulty in our heavy clothes, hand in hand. We were very cold.

We kept on, more and more slowly, until nearly midnight. Elaine was easily fatigued—she had risen literally from her death-bed—and I was already nearly worn out. Elaine stumbled at last, and went down on her knees. I caught her in my arms, and held her tired head up with my hand.

"Can't you go on any longer, Elaine?" I muttered. She shook her head weakly. Her face was very white in the moonlight; her eyes looked at me under long lashes beaded with ice. Her lips were unable to smile. She whispered, "No, honey."

"Then, we'll rest. . . ."

I laid her down in the snow. She was unconscious. I took off one of my coats and made a pillow for her head. The other I spread over her. I lay down, sheltered by her body from the wind, holding her tightly in my arms, my face close to her face. But she could not protect me from the cold. I had only my tunic again, and my shoes and gloves. I closed my eyes very soon, and forgot.

Once—it may have been only a few minutes later—I heard Elaine's voice, but I could not tell what she was saying. Opening my eyes, I saw her face dimly in the shadow. Her mouth was speaking to me, close to my ear. I kissed her weakly, once more, and then my eyes closed again. Darkness gathered in my head, even before our lips parted.

CHAPTER VIII

Conclusion

WHEN I awoke, there were voices about me. A man said:

"How are you now, my children?"

Elaine's voice answered: "Better now, sir."

Without surprise, I looked up and saw the man bending over me. It was Kivro, the Mexican explorer. He smiled with a touch of irony and a touch of tenderness. There were other men in the room. Kivro touched my forehead, and said: "He's all right."

"I'm glad," Elaine said. I turned my head. She was lying at my side, fair and beautiful, her brown hair tumbled on a pillow. Our hands touched, under the covers. I whispered: "Darling. . . ."

"We'll go away now," Kirvo said, his smile fading discreetly. "There are other things to do."

We looked up at him, unable to speak, while he joined the other men at the door and went away, closing the door gently behind him. We were silent for a little while. Then I said: "How did he find us, darling?"

"He was curious," Elaine murmured. "He wondered what you were after, so he followed you." She turned her head to me, with a smile, and added, "It was for the honor of his family."

"Where are we now?"

"On his ship. It's a big ship."

"Yes."

Elaine said: "There's nobody but ourselves left anywhere in the world?"

"Nobody," I said. "Nobody like ourselves. But people are kind."

"And we shall always be alone?"

"Yes. And there will be nothing to do, ever, except live—and be happy."

"That's enough," Elaine said.

"Quite enough."

"It's like being a child again."

I nodded. The walls and floor of the little room hummed faintly, as if powerful engines turned behind them. I thought of Egypt. The wind whistled beyond a high window over our heads. It was late afternoon; a warm red square of sunlight hung suspended on the ceiling.

I whispered, "And you love me?"

"Yes," Elaine said.

THE END

The Birth of a New Republic

By Miles J. Breuer and Jack Williamson

(*Continued from page* 73)

race of Selenites. It is thirty years now, since chubby, red Jenkins visited me last at Firecrest. In vain I tried to persuade the old scout to settle down there and spend his last days in peace. He showed me a few grains of radium in a leaden tube, whispered to me of a great strike rumored far beyond the Hercynian Mountains on the borders of the moon. He left me, with a last grip of his sun-burned hand—which was not so firm as it once had been. Upon scarlet old M'Ob, he went leaping away, into the unknown wilderness beyond "the rim."

He never came back.

During these last forty years, the exploration of the other planets has gone forward swiftly. In 2340 an expedition from the earth visited the cloudy world of Venus. Three years later, Paul Doane led a fleet of three new fliers from Firecrest on a voyage of discovery to the red planet Mars—what he found there is no part of my tale.

Mercury, several of the larger asteroids, and Jupiter were soon reached, and each has been partially explored for minerals. In the past twenty years colonies have been established on Pallas, and on Callisto, one of Jupiter's moons. And the fleets of wandering ships that frequent the planetoid belt, mining those tiny rocky worlds of their precious minerals, have been the messa of all adventurous youth for the last quarter of a century.

In the year that I write, an expedition is setting out for ringed Saturn, upon which no man has yet set foot. It is a source of pride, as well as of anxiety, to me that my grandson, another John Adams, who is as fine a young man as I know, is to command one of the four ships.

I am an old man now—there is no escaping that. Leroda and I have lived together for fifty happy years. The Firecrest mines are now among the greatest on the moon, but I have relinquished the management of them to my son. Now, from the eminence of a long life that has been for the most part peaceful and happy, I can foresee for my children a glorious United Solar System.

THE END.

And then . . . the jungle parted and framed in the dark background of the trees, the thing appeared! . . . And in one of its immense hands was grasped the still writhing, horribly mutilated body of a brown-skinned savage!

When the Moon Ran Wild

Illustrated by MOREY

By A. Hyatt Verrill

Author of "Astounding Discoveries of Dr. Mentiroso," "The Bridge of Light," etc.

IN the open seas the tides are at their minimum and in the constricted bays they rise to maximum heights, but always tides are principally due to the gravitational attraction of the moon. To the casual layman observer, cosmic life is apparently unchanging. Yet, infinitesimal as the changes are, changes do occur. Suppose that for some reason, beyond our present scientific knowledge or comprehension, the moon, for instance, should increase its speed of rotation or its frequency, which would mean, of course, that it was coming closer to the earth! Notwithstanding that the world remains certain that such a thing can never happen, it is interesting to figure out, scientifically, of course, the various attendant possibilities with their inevitable dangers and results. When that figuring is done à la Verrill, by Mr. Verrill himself, disappointment must go beyond the bounds of possibility. And it does.

CHAPTER I

An Unheralded Phenomenon

AGE has many advantages, that is, if together with age one retains all one's faculties, one's health, strength and energy. It enables one to observe life from the proper angle, in the proper perspective, I might say; to weigh and measure events according to their influences exerted through a long period of time, instead of for the transitory present. It gives one experience impossible to obtain in any other manner. It instills into one a deep knowledge of men and women and of life in general, that only long years can teach. It demonstrates the triviality of many matters deemed most vital by youth. It gives one a calm, peaceful and optimistic point of view. Most of all, it enables one to revisualize most vividly and accurately the events and occurrences of years past, which, as recorded in books or passed down from person to person, are seldom accurate and frequently are most incorrect.

At the time of the occurrence, of which I write, I was what was then considered an elderly man. Elderly! I smile to myself as I think of that term and what it meant in those days. Barely sixty years of age and "elderly" with the expectation, no, the possibility, of twenty or at most thirty years of life, provided I met with no accident, no serious illness.

Yet now—after more than two centuries have passed—yes, two hundred and fourteen of the old-time years, for it was in the year 1931 of the old calendar that the moon ran wild, while this year, according to the reckoning of my youth, would be 2145 instead of 165 as we know it—after two centuries and more, as I say, I am still alive, I still retain my health, my strength, my vigor, all my faculties, and am no older, mentally or physically, than on that day in 1931 of the old calendar when I was looked upon, and regarded myself, as an "elderly" man of sixty!

But everything in this world—and for all I know to the contrary in the next as well—is a matter of custom, of habit, of environment and of relativity.

I cannot help thinking—and am personally convinced of the fact—that there was an omnipotent power back of the whole affair; that it had been planned and ordered by the Creator from the beginning of time, and was as inexorable as Fate, and that it was Divine justice that the race, having been all but destroyed, should have been given the blessing of longer and better lives than ever before.

And though I am but poorly fitted for the task and am a most unworthy instrument, who can say that it was not in the Plan for me to have survived where others fell, to have gone through the whole, in order that I might record my experiences for the benefit of my fellow men?

Reasoning from a scientific viewpoint, I feel sure it was but a repetition of a cycle in the history of the universe and of our planet and its satellite.

No doubt, in fact, beyond any possibility of a doubt in my own opinion, each of the recurrent cycles has

been shorter and less violent than those preceding it. And while I am sure that the same or rather a similar catastrophe will be reenacted in the dim and distant future, I am equally convinced that the next occurrence will be more brief and of less intensity than this last.

Yet even today, notwithstanding the vast advances we have made in scientific research, we really know very little about the history of our planet or about the laws governing the universe.

I know—we all know—what actually took place during that shattering, numbing, paralyzing occurrence known as the time "when the moon ran wild." We all know or should know the immediate, far-reaching results that followed and were produced by it. But no one knows—despite guesses and theories advanced—*why* it occurred, why (within historic times) it had not happened previously, why it did not continue indefinitely, why the universe slipped back into its accustomed (or nearly accustomed) existence or whether it may or may not recur at any moment.

According to all accepted theories and supposedly natural laws, as held in 1931, our earth followed (as is had followed for infinite aeons) a definite course or orbit about the sun, at the same time rotating upon its own axis.

According to the then accepted astronomical and scientific "truths," our own satellite, the moon, followed its orbit about our earth and accompanied us on our journey about the sun. According to these accepted theories the force known as "gravitation" kept everything in place and in proper relationship, and according to the rules of the game, as established by science, any alteration in the fixed positions, the customary movements, the plotted planetary orbits, would result in virtual chaos, the annihilation of celestial bodies and such vast destruction as no one could survive.

Yet when the amazing and terrible event took place all of these theories, these assumptions, these scientific rules and regulations, these accepted "facts," were knocked (to use an expression of two centuries ago) higher than a cocked hat.

There was not even a warning, a premonition of what was impending. No astronomer, studying the heavens night after night, detected anything amiss, anything unusual in the solar system or in space. There was not even a comet, a meteoric shower, a stray aerolite or a "dark planet," speeding through space following a parabola or hyperbola that might cause it to collide with the moon, the earth or any other celestial body. The entire universe appeared absolutely normal, absolutely undisturbed, absolutely serene, and precisely as it had appeared for night after night and year after year for countless centuries.

The phenomenon burst upon us literally from a clear sky, utterly unexpected, utterly unheralded, not even surmised. One moment the earth was rotating smoothly upon its axis, following its accustomed orbit about the sun, with the moon calm, serene, shedding its pale, cold light upon us; the next moment it seemed suddenly to go mad and everything was chaos.

How clearly, how vividly I recall that evening. I was in Peru at the time (you will find the locality indicated on the maps showing the surface of the world prior to the old calendar year of 1931). It was late in the afternoon, and in company with my wife and granddaughter—a child of some three thousand days of age—I was watching the sun sink towards the rim of the Pacific Ocean. In those days the sunsets in Peru were gorgeous sights and always, whenever possible, it was our custom to watch them, thrilled, entranced, impressed by the glory of the gold and crimson sky, the constantly changing play of magnificent colors that painted the entire heavens from horizon to zenith with indescribably brilliant tints and that transformed the lofty Andean Mountains in the near background to dull-red masses that glowed like molten metal.

On this particular evening the sunset was exceptionally gorgeous. It had been, I remember, an unusually hot and sultry day for Peru—such a day as often presaged an earthquake in the vicinity—and we watched the great fiery ball of the sun until it had sunk from sight below the edge of the sea. Then, as I turned for a look at the mountains and the eastern sky, I was surprised to see that instead of fading as the sun sank lower, the lurid light that bathed the mountains and the eastern sky above their summits was rapidly brightening. Even before I could call my wife's attention to the phenomenon (though that was unnecessary, for she, too, as well as our granddaughter, had noticed it) the sky over the Andes blazed with crimson, with scarlet, with gold, with colors more brilliant, more gorgeous than those that had just faded in the west. It was as if an immense, a titanic conflagration was taking place beyond the Andes. I was speechless with wonder, with an indefinable terror that caused chills to run over me. I felt my wife grasp my arm, our granddaughter cowered beside me, uttering whimpering, terrified sounds. I heard the gasping, almost sobbing, breath of my wife. I was aware of a strange, inexplicable hush, of an awe-inspiring silence everywhere; a heavy, oppressive, dead feeling in the air that seemed actually to press me down with its weight and—so strangely do trivial and minor details impress themselves upon one's mind when under the stress and strain of some overpowering emotion—I noticed hordes, thousands, of the black vultures flying madly in a dense cloud across the lurid sky. And then, tense, wide-eyed gasping for breath, numbed with terror of the unknown, as we gazed, a tongue of flame seemed to shoot up to the zenith from the mountain tops. My wife uttered a sharp, blood-curdling scream, the child shrieked, yet that dazzling sheet of fire that flamed above the Andean crest brought sudden relief to my mind, for (so my brain reasoned in the fraction of a second) it explained everything. It was some distant volcano in eruption.

But the next instant reason seemed to leave me. I drew back, tried to shrink away, screamed like a madman. Up from where that flaming light had streamed burst a gigantic, incandescent globe, like a rising sun magnified a hundred times!

I COULD not credit my reeling senses, could not believe what I saw. The sun had sunk as usual in the west not ten minutes before, and here—before my amazed, incredulous, horrified eyes—it was rising, rising with incredible speed and inconceivably enlarged, above the mountains in the east. Unconsciously I had dropped to my knees, was fairly grovelling, as that huge, fiery ball raced—yes, there is no other term to describe it—raced, I say, up towards the zenith.

"My God!" I gasped, hoarsely, chokingly. "My God! The end—"

I felt the spasdomic grasp of my wife's hand relax. I heard her utter a single, half-suppressed, gurgling cry. But I was too horrified, too utterly paralyzed with abject terror and awe, even to glance at her. My eyes, all that was left of my shattered senses, were fixed upon that awful, terrible ball of fire. Each instant I expected to feel its scorching, searing, shrivelling heat. Each instant I expected to see the entire country—the trees, the vegetation, the houses—burst into flames as the incandescent sphere passed overhead.

But nothing happened, nothing, that is, that I expected. I saw the glowing mountains vanish in a cloud of smoke or dust. I saw the tall poplars, the palms, the stately pines bend and sway as if with a gale. A

hot, dry, withering wind lashed my face and came shrieking, bearing a cloud of dense impenetrable dust upon us. Then as the awful thing passed swiftly, silently across the lurid sky, and I gazed upward at it through the swirling dust, the sudden numbing, incredible realization came to me.

The dust acted like smoked glass. The dazzling, blinding ball of fire was transformed to a dull-red globe, and clearly visible upon its surface I saw—even in that brief, almost visionary view—the familiar, unmistakable craters of the moon!

CHAPTER II

What Caused This Madness?

SOMEHOW—I cannot even now explain why—my astounding discovery that the gigantic, glowing, incandescent mass was the moon, brought immediate relief. Perhaps my mind was too dazed and numbed by the terror and horror of the events to realize what it all portended, or again, it may be that my paralyzing dread of being burned to a crisp by the sun, supposed to be so near at hand, was suddenly dissipated, when I discovered it to be the moon. For so long had I and everyone become accustomed to regarding the moon as a cold, harmless, innocuous thing, that the idea of its becoming transformed into a fiery, dangerous object was utterly beyond the grasp of the human mind.

Whatever the cause, no sooner had I realized that it was the moon—and so distraught was I, that, at the time, I never stopped to think or wonder how it could be the moon or realized the seeming impossibility of the fact—than most of my terror vanished. Also, the glowing orb had by this time passed beyond the zenith and was well out over the Pacific and growing steadily smaller in the distance. Indeed, had it not been that I actually had witnessed it rushing upward from the east, and had not the scorching hot gale still been screeching over the land to prove the fact, I would have sworn it was but the sun shining redly through the haze of dust that now had spread like a vast, sun-colored fog-bank across the sea. It has taken time for me to describe my thoughts, my sensations, but it must be borne in mind that all had happened in a moment, in the flicker of an eyelid, one might say. My thoughts, my reactions, my realizations all rushed over me at once—confused, jumbled—a chaotic mental storm. Almost coincidentally I realized a dozen different things. I realized—with a dull, numbing feeling—that my wife, who a few moments before had been watching the sunset beside me, exclaiming at its beauty, was dead. That the terror inspired by the sight we had witnessed had been more than her weak heart could bear and—subconsciously—I felt grateful rather than racked with sorrow that it was so, that she had been spared the greater horrors, the worse death, which—at the same time another cell of my brain was telling me—were certain to follow this disruption of the order of the universe. Coincidently, too, I had raised my weeping, almost crazed granddaughter and was—quite unconsciously—striving to calm, to reassure her, while at the same time, my eyes, my conscious faculties were fixed upon the sea.

What I saw was enough to drive any human being mad. Outward from the shore, roaring with the thunder of a thousand hurricanes, was an immense wall of water rushing, surging, hurling itself into the west, following in the track of that speeding, crazed, fiery moon, and leaving the floor of the sea bare, shining, alive with writhing, flapping, twisting, crawling creatures.

For perhaps three seconds I stood there, holding the child in my arms, heedless of the body of my wife stretched at my feet, gazing fascinated with horror at that outflowing ocean and the oozy, horrible depths exposed behind it. Then, with a sudden, numbing, terrible, indescribable terror, I realized what this cataclysm presaged. That mad moon, that racing, disorganized satellite, was dragging the entire Pacific behind it, piling the waters of that vast ocean into a west-bound tidal wave of stupendous, inconceivable proportions. And at any moment, any instant, it might—in fact assuredly would—come rushing, roaring, seething back, a mighty irresistible wall of water that would hurl itself upon the land, would inundate the country, would bury the valleys, the deserts, the hills, even the lower mountains, beneath a raging, turbulent sea, and would wipe cities, towns, and every vestige of life from the face of the earth within its reach.

Realization of this galvanized me into sudden life, sudden activity, sudden conscious voluntary reasoning. I sprang to the vehicle (automobiles they were called) in which we had traveled to the spot, dropped the still sobbing, terrified child upon the rear seat, and drove as I had never driven before, towards the nearby city and my daughter's home. Broken branches, fallen limbs, tangled wires strewed the road, yet I hurled the car through them regardless of such minor dangers. Several other vehicles (we spoke of them collectively as cars) had been upset by the sudden blast of the gale. People, terrified, distraught, some screaming, others praying, still others running aimlessly about, thronged the streets everywhere, and I saw many apparently dead or injured lying where they had fallen.

Only a tithe, only an infinitesimal portion of those terrified, fear-crazed people could be saved from the impending catastrophe—in fact the chances were that everyone on earth would soon perish—yet I felt it my duty to do what I could to warn them of their most imminent peril, and as I passed, I shouted to them at the top of my lungs: "To the hills! To the mountains! Hurry for your lives!"

Perhaps some understood. Perchance some grasped my meaning. But the majority were too excited, too overcome with superstitions and real dread, to give heed. To their minds, no doubt, the end of the world had come—as I felt myself was doubtless the case—and like frightened sheep they milled and crowded and screamed as they rushed about, not knowing which way to turn, from what direction or at what instant a terrible fate might descend upon them.

But it was no time to stop, to argue, to explain. Self preservation is ever man's first instinct, and I had not only myself but my dear ones' lives to save, if saving were possible. I breathed a prayer of thankfulness when at last I reached my daughter's house, and dashing in, found her, insensible, prostrated from terror and shock, but alive, I picked her up and carried her to the car. Her husband—I thanked God for that—was absent, in the interior of the country, in the high mountains and so, I prayed, was safe.

I could not do more. I had intended to try to save others, to take others in the car and carry them in my mad drive into the mountains, but it was impossible. Everywhere the crazed people were rushing, screaming towards me. Had I lingered an instant, I would have been overwhelmed, the vehicle borne under by the fear-driven mob who, too maddened by sheer terror to try to save themselves or to make any effort in their own behalf, saw or imagined they saw safety, salvation in the car, as I dropped the unconscious form of my daughter beside her child.

Even as it was I barely managed to win clear. As the car leaped forward, a dishevelled girl threw herself upon it and clung shrieking. With one hand I reached

back and dragged her in, but a moment later she sprang, shrieking, from the car. Two boys raced forward and found foothold on the rear of the machine, only to be dragged off by others. Dozens, scores rushed after us; other dozens strove to bar our way. Yet, so firmly fixed is habit in the human mind that despite their overwhelming terror of the mad moon and the results it might bring, they reacted involuntarily to the more familiar danger of the speeding car and sprang aside ere they were knocked down and ground beneath its wheels.

A MOMENT more and we were free from them. My daughter's house, fortunately, was on the outskirts of the town; only scattered houses and huts lay beyond, and a straight concrete road stretched across the plain and desert to the mountains. It was now dark, yet with a strange, lurid glow in the air, and I was aware rather than saw, that the sky was a dull, horrible red, as though from a far-distant fire. What would be the outcome of this incredible upsetting of the universe I could not surmise. I felt confident, as certain as of anything, that we would all perish, that the tale of life upon earth, if not the earth itself was near its end. Yet so strong is the instinct of self preservation that I drove madly, recklessly towards the dark mountains looming against the lurid sky, my one idea, my one thought to gain the heights, to escape the inrushing tidal wave I knew must come roaring, thundering in from the west; the one tangible, conceivable certain peril that impended. Neither was I the only one who had sensed this most imminent danger. Scores of vehicles were racing along the road, though mine was in the lead. Scores, hundreds of persons—afoot, on horseback, astride burros, driving carts—were streaming across plain and desert, converging from every direction, hurrying, rushing, panting, screaming, cursing, crying as they raced towards the mountains where—instinctively—they felt there was safety. Few of that mob of thousands ever reached their goal. The mountains were miles away, hours were necessary to reach the first heights, and scarcely farther in the rear, that irresistible, terrible, stupendous wave was roaring inexorably in from the west, its foaming, thundering crest reared for hundreds of feet above the ocean's bed, and with half the Pacific Ocean behind it.

Even we in that speeding car barely escaped. I had outdistanced all others; I had left the nearest cars miles behind; I had surmounted the first steep grades and was more than one thousand feet above the level plains, when, through the ghastly red darkness, I saw the first onrushing wave strike the distant coastline. Though it was more than twenty miles distant, yet the thunder of its impact came to my ears. The upflung spume leaped seemingly mid-way to the zenith, and then coast, plain, desert, towns, cities, vanished as if swallowed by the sea, as that titanic wave roared hissing, seething, crashing in thunder across the land. So tremendous was it that as it reached the base of the mountains, it bolted, surged, was flung upward until the laboring car was spattered with the spray, and for an instant my heart seemed to cease beating as the waters rose nearer and nearer the lofty roadway that wound ever upward ahead.

Barely fifty feet below us the water ceased to rise. For perhaps five minutes I gazed down upon a vast, heaving, turbulent sea, above which the mountains rose. Then, with a horrible, indescribable sucking, sighing noise that I shall remember until my dying days, the water fell, receded. I saw no more. Before me was a deep cleft, a narrow cañon through the hills. The land, the horrors of that vast wave were shut out from sight, and though I knew there would be another and another of those incredible, monstrous waves, yet I hoped and prayed that they would be no longer than the first and that ere they came sweeping, rushing in across the land, we would be safe beyond their reach.

Fortunately the dull-red glow that suffused the entire world filled the cañon, so that its depths appeared like the interior of a vast furnace, for even the brilliant headlights of the car were inadequate to illuminate the winding, zigzagging, steeply ascending roadway that, barely wide enough to permit our passage, climbed back and forth up the dizzy heights. Even in daylight it was a road trying on the nerves and requiring a steady hand and head to traverse, yet so overpowering was my sense of impending danger, so overwhelming the whole state of affairs, that I drove over it in the semi-darkness at break-neck speed. And it was fortunate that I did so. Before we were half way to the summit of the vast ridge ahead, my ears were deafened by a terrific, thundering roar as of a thousand avalanches, and as I swung about a sharp bend and glanced back, I saw a sight to freeze the blood in one's veins.

Into the narrow gap through which we had entered was pouring a mighty cataract of tumbling white water looking like molten metal in the ruddy glow. Already the narrow cañon was deep with it; with incredible speed it was rising, and before I had turned the next bend a swirling, ominous, horrible maelstrom was lapping the road, where a moment before, I had been. I believe I screamed with terror. How much farther would that flood rise? Were we doomed to be caught, overwhelmed, drowning like rats in a trap?

Upward we climbed. Now the summit of the ridge loomed dark against the sky close ahead and above. We were fully three thousand feet above the normal sea level. But the flood below had ceased to rise. Less than one hundred feet beneath us it had stopped, and I knew we were safe from this menace for a space. Yet if those terrific tidal waves could rise for nearly three thousand feet above the normal level of the ocean, how could I be sure they might not rise four, five, ten thousand feet or more and flood the entire continent?

My thoughts were interrupted by hearing my daughter's voice, talking in low tones to the child, comforting, reassuring her. She had recovered consciousness, thank God, and was still sane. But she did not speak to me, asked no questions, and it spoke eloquently of her presence of mind, her courage, her common sense, that she made no inquiry as to her mother. But she knew—as she told me later—that her mother must be dead, otherwise she would have been in the car with us. And even in her heart-breaking sorrow, her mental anguish, her own terror, she choked back the words she longed to utter, the question she ached to ask, for she feared to do so lest it might distract my mind, might draw my attention from the road, from that dangerous, terrible narrow trail we were traversing and where the slightest wavering, the least veering of the wheels would send us hurtling to destruction over the brink of the abyss below us.

As we neared the summit of the ridge, I noticed it had grown appreciably lighter, and as, with a heartfelt prayer of gratitude to the Almighty for having escaped from the awful death that had threatened to engulf us, I stopped the car upon the bare summit of the mountain, the eastern sky was glowing rosy and pale cold. Could it be that so many hours had passed? Could it be possible another day was dawning? I looked at my watch. It was not three o'clock. Sudden terror seized me, held me mute, gaping. What terrible, unknown, inconceivable thing had happened that the sun was rising three hours earlier than it should? Had the whole universe gone mad? My mind by this time

was beginning to function sanely—yet if the sun were rising the earth must have speeded up its rotations. Could that have happened without my realizing it? Could it be possible that the sphere had so increased its revolutions without destroying everything upon it, without hurling everything about like chaff? But too many incredible, inconceivable events had happened during the past few hours to enable me to find answers to my mental questions. And they had flashed through my brain in the fraction of a second. Then, above the farther jagged summits and snow-capped peaks, a tongue of vivid red shot upward. And even as realization came to me once again, that huge fiery sphere hurled itself into view from behind the Andes. Gasping for breath I watched it, transfixed. It was the moon, not the earth that had increased its speed, that had made a complete circuit of the earth in seven hours! Yet that did not lessen the danger, did not alter the certain fate to which all life upon earth was doomed. The satellite was near—incredibly near us. It seemed even larger, more terrible than when I had seen it before. Huddled together upon that bleak Andean summit we three watched it with bated choking breaths, too awed to utter a word even to groan in terror. Then I noticed that the surface of the rushing, glowing sphere seemed strangely altered. I could see none of those craters I had recognized before, and with this discovery came wonder that I could gaze at it without being blinded. Certainly—my mind unconsciously reasoned—it was not so brilliant, not so dazzling as before. It seemed more of an orange, a golden color than blazing red. And then—was I going mad?—upon the surface of that great globe, I clearly saw the outlines of land—of continents, islands and broad oceans! What did it mean? What had happened? Was it the moon or some other planet?

Sudden stunning comprehension came to me. I was gazing at the other side of the moon! I was looking upon that surface that never before had been seen by human eyes! The moon in its doubled speed must of necessity present its entire area to the earth if its rotational speed had increased to correspond with its increased orbital speed. It was clear as day to me now. And then a great relief, a great joy surged through me. The thing could not be ablaze, could not be molten, for the oceans, the water, were there!

Its color, its fiery appearance was optical—the result of atmosphere, of reflected sunlight or earthlight or perhaps because of the satellite's nearness.

Yet my heart sank and I felt numbed, chilled at the thought. Hot or cold that terrible thing must inevitably strike the earth and end all. God! how I hated it! Words cannot describe the hate, the anger I felt. It had robbed me of my wife, had wiped cities from the earth, had destroyed hundreds of thousands of human beings. It would bring about the destruction of every living thing on earth. Shrieking, screaming, I sprang to my feet, cursing, shaking my fist at the speeding nemesis of the human race. For the moment I must have gone raving mad.

CHAPTER III

In the General Upheaval

THEN came the earthquake. No words can describe the horror of it. The solid rock rose, heaved, billowed. We were tossed about, hurled to the earth. The mountain peaks seemed tumbling about our heads. Stupendous avalanches thundered down the precipices. The world seemed a chaos; the mighty Andes reeled. Great chasms split the rock-walls asunder, and the dust of riven mountains, of descending landslides enveloped us in suffocating clouds in whose blackness we grovelled, clung with fingers to the stony ground, shrieked in maniacal terror. Then abruptly—silence. Silence as awful as the terrific maddening din of an instant before. It was as if the world had ended. There was the silence of cosmic space. Yet we remained—we three, alive, unharmed upon that isolated mountain summit, perhaps—I shuddered at the thought—the only living human beings remaining upon earth!

And even we seemed scarcely to be alive. All action, all power of speech seemed to have been wrested from us by that fearful convulsion of nature, and we cowered there, wide-eyed, dumb, motionless, tensed, waiting for something—for a repetition of that rending of the earth, for the end of the world, for that vast, suffocating, terrible silence to cease even though it preceded our deaths. It was the child who broke the spell, complaining fretfully that she was thirsty. Somehow that wee, small voice, that familiar sound brought us back to earth and to senses and life with a jerk. And as if the words had been the charm that the whole earth awaited, once again the familiar sounds of the world were resumed. A lizard rushed with a scuttling noise across the rocks. A cactus wren trilled sleepily. A burrowing owl uttered a plaintive hoot. Some insect shrilled. The distant rush of a mountain torrent came to our ears, and the air was filled with the faint, almost inaudible, inexplicable night sounds of the mountain heights. A strange, amazing reaction swept over me. No longer did I feel terrified, dazed, trembling with deadly fear of the unknown. I felt as if I had just awakened from a vivid nightmare. Everything seemed so normal, so natural. Even the night had lost that ominous red glow. Stars shone in the velvet, black sky. Aside from a strange, heavy, humid feel in the still air—the hot, steaming feel of the tropic jungles—where it should have been crisp, cool, invigorating at those heights, there was no sight, no sound, no indication that anything had changed, that the earth, the moon, the universe, were not following their ordinary accustomed courses. Only our presence there upon the mountain top, my daughter and granddaughter there alone with me beside the car, convinced me that it had all been real, that it had been no dream.

I rose. "I'll get you a drink, Chiquita," I said. I went to the car, secured the thermos flask invariably in it—for in a waterless, desert country one never travels without water—and returned with it to the child.

Her mother also drank. But none of us spoke much. A few questions. Answers. A few stifling sobs from my daughter as I told her of her mother's death. A cry of pity and horror for all the thousands who must have perished miserably. Then: "Thank God, Frank may be safe!" she said. "Can we—Oh, Dad, do you think we can reach him? He should be at Rincon. Do you think he is safe there?"

"From the tidal waves—yes," I assured her. "Rincon is over ten thousand feet above the sea. But, of course, no one can say what may have happened during that earthquake. But I feel sure he's all right. Come! We're wasting time. We must be getting on. We must reach some town or village where we can secure food and then push on to Rincon. I——"

"But, but—" she shuddered and clutched my arm convulsively, glancing nervously at the sky as she spoke—"that—that awful thing, that blazing——"

"The moon," I told her, "didn't you know. The moon has gone wild—has flown out of its orbit. But horribly awesome as it is, I do not think we're in danger—yet. Of course, if it is coming closer, if it strikes the earth—even our atmosphere—. But it may not, it may be receding. And if it comes no nearer, I don't think anything worse will come than already has occurred."

We were climbing into the car. "As I look at it," I continued, and I found wonderful relief and a vast amount of returning confidence in talking, "the greatest effects that this mad moon would have upon the earth would have occurred when it first altered its course. Yet as far as we know, nothing but the tidal wave followed. The earthquake was probably the direct result of that. The water, undermining the hills, washing away the deserts, roaring into cracks, faults, crevices or perhaps even reaching the internal heated rocks of volcanoes, would account for that. It may have been very local, too. What the final effects will be, no one can surmise. The oceans must be altered—that goes without saying—perhaps vast areas of land will be transformed to seas, seas to land—and the tides will be terrific, inconceivably high. But the mountains, the heights, may remain unaltered, and barring accidents I cannot see why all who were above the reach of the tidal waves should not be safe."

I started the car.

"Oh, but it's too terrible, too awful to think of the poor people! To think that thousands—millions—must have been killed!" she cried in anguished tones.

"Yes, yes, dear," I comforted her. "But perhaps the loss of life was not so great as we imagine. And we must be thankful—must give thanks to God—that we are saved from such a fate. No doubt thousands of others also escaped. Don't——"

I BROUGHT the car to a jolting stop in the nick of time. Almost under our wheels the road vanished in a yawning black chasm. Our way was barred. The earthquake had split the mountain side from top to bottom and where once the road had been was only abysmal space and riven, scored, shattered rock.

I descended from the vehicle and peered about, but it was impossible to make out anything in the darkness.

"Don't be frightened nor discouraged," I said, as I returned to the now useless car. "When daylight comes we'll be able to find a trail or an old road—the ancient Incan road runs very near here—and we can make our way on foot to the little village just beyond that hump-backed ridge. We'll find food there, Indians, donkeys. Then we can go on to Rincon. It will take longer, but if it's slow, it will be sure. And—" I added, as I looked at my watch, "it will soon be daylight. We——"

The words stopped on my lips as a new and fearful thought swept through my mind. If I was right, if the mad moon had doubled its old pace, the terrifying red planet would come rushing up from the east almost coincidently with the sun. And if so what would happen? What cataclysm might not result? I was no astronomer, I could not foresee possibilities, could not reason scientifically on the probable results, but I felt—instinctively—that with those two planets rising together, some terrible event must follow. Then abruptly I laughed—hoarsely, madly. The moon had already encircled the earth on its wild flight, somewhere on its journey it must have risen at the same time as the sun. And yet nothing cataclysmic, nothing to disrupt the earth had happened. I felt vastly relieved and almost calmly rejoined my daughter and the child and awaited the coming of whichever planet might be the first to appear.

We had not long to wait. Again the eastern sky glowed and gleamed with colors that at another time and under normal circumstances would have been awe-inspiring in their gorgeousness. Once again that lambent banner shot to the zenith like a fiery herald, and once more like a red-hot cannon ball fired from a titanic gun, the moon seemed hurled from behind the mountains into the sky. But this time—despite ourselves—we cowered with terror-filled eyes from sight, the orb appeared paler, scarcely more than pink and ere it reached the zenith it faded, became a faint rose. With a start I realized that day dawned, that the sky was light and that—God how welcome it seemed!—the sun was rising in all its splendor in the east; the same old sun, unchanged, unaffected by the mad antics of the tiny body that was our satellite.

Words cannot express the relief we felt, the confidence that was instilled into us as the slanting rays of the sun streamed across the mountains. Already that racing, insane moon was dropping toward the west, fading, paling in the increasing light of day, and in that burst of sunshine, that reappearance of the sun, the smaller sphere seemed almost trivial, almost impotent. No wonder, I thought, that the Incans—that all primitive people—had been sun worshipers. The child also felt the change, the joy brought by the sun and daylight. She clapped her hands in delight. Terror fled from her face. She sprang from the car to chase a gaudy butterfly among the wayside heliotrope, and a wan smile flickered over the pale, harrowed face of my daughter.

We had little trouble finding the trail, llama paths led everywhere in every direction. But all, I knew, led eventually to the ancient Incan road, and though the climbing was hard, though we panted and struggled, though in the now torrid, steaming heat we were drenched with perspiration, yet in time we topped the ridge and found ourselves upon the ancient highway. My only fear was that it, too, had been disrupted and made impassable by the earthquake.

In places it had been injured; cracks yawned in it, and in one spot a landslide had swept it away, yet we managed to find a way around the obstacles, and an hour later came to the little village that, I knew, lay tucked into a tiny valley on the further side of the range. But the place was silent, deserted. The huts of stone and thatch were vacant, empty. The Indians no doubt had been frightened out of their wits and had taken to the hills. But that made little difference to us. They had departed in haste and plenty of food—dried meat, corn, fruits, barley and potatoes had been left behind. And to my delight there were burros grazing in the scanty herbage of a tiny terraced hillside pasture, and in a corral a herd of llamas was gathered, gazing at us with supercilious serenity, and as unmoved by the terrifying occurrences that had taken place, as though accustomed to such phenomena all their unemotional lives.

We ate and rested. At best there was a hard and weary journey before us, and I insisted upon Isobel and Mathilde (the child) having some sleep. Of course Isobel demurred—she was all anxiety to rush on and join her husband—but she was utterly worn out with fear, nervousness and sorrow, and at last she yielded and almost instantly was slumbering soundly. While they slept, I busied myself gathering everything I could find which might be necessary or useful on our coming journey, for with the llamas and the donkeys at our disposal we could carry as much as we desired. There were, as I said, abundant supplies of food such as it was; there were cape-like garments called ponchos that would serve to protect us from rain and inclement weather, there were sandals that would be most useful if our shoes wore through on the rough stony trail, there were rugs and cloth that would serve in place of beds and bedding, and in one house I found a gun—a weapon that was in comon use in those days—which pleased me greatly, for with it I felt I could no doubt

kill wild birds and animals to supply us with fresh meat food. All these things and many others I packed upon the backs of the llamas, retaining the donkeys for our own use.

AS I wandered about through the village, I might have been—in fact for all I knew I was—the only man left upon earth, yet so normal did everything appear—the sunlight, the mountains, the songs of birds, the llamas and donkeys, the vegetation, the blue sky, the glaciers on the peaks—that I could not force my mind nor my imagination to the realization of what had occurred, even though I had been an eye-witness of it. Environment is, as I have observed, one of the greatest, if not the greatest, factor in governing men's lives in actions, and my environment in that Andean village was (aside from the absence of the inhabitants) precisely what it would have been under ordinary conditions. No, I must qualify that statement. Ordinarily it would have been cool, fresh even at midday at that altitude. Now it was hot, tropically hot, with a strange heaviness in the air, and as I glanced at the glaciers and snowcapped peaks, I noticed that innumerable streams of water were flowing from them, leaping in flashing cataracts down the mountain sides, as the ice and snow of countless ages melted and dissolved under the abnormal temperature. Often, under the force of this water and the erosion of these newly formed streams, great masses of ice and snow would be dislodged and would come thundering down in avalanches. That this unusual heat was the direct result of the moon's wild antics I knew, but I could not reason why it should be so. The moon, I felt assured, was not hot—at least not a molten nor fiery mass—and I reasoned that if the increase in temperature was due to the planet's friction through our outer atmosphere, then that same friction would have transformed the moon itself into a furnace. Not until long afterwards did I learn the reason for this unusual heat. And not until long afterwards—until years later—did we learn of the true state of affairs, the inconceivable alterations that had taken place upon our earth, and of the unimaginable effects brought on by the moon's mad pranks.

But, as it is necessary that some of these be known, if for the better understanding of my readers, I will briefly mention some of the more important matters.

The series of tidal waves that continued for months as the moon raced about the earth had swept coasts, plains, deserts and valleys, every portion of the earth, to a height of over two thousand feet above the sea's normal level. And as fully ninety per cent of the world's greatest cities, its industries, its centers of art, literature, science and learning; its manufacturies, its transportation systems, its governmental seats, its archives, its military forces and its population were situated below the two thousand foot level, every vestige of these, and practically every living thing within that area, had been utterly destroyed. Of course many—though in comparison to those lost a pitiful few—had escaped. Some had taken to the air in the flying mechanisms known to us of those days as airplanes and dirigibles, others had been borne safely in the ships and vessels that by miracles had survived, and others, like ourselves, had made their way to the higher altitudes by automobiles and other ways. Also, there were many towns, many great cities and a comparatively large population above the reach of the stupendous waves, while still others, even though below the two thousand foot level, were in interior valleys or plains where, protected by impenetrable mountain ranges, the flood could not reach them.

But it was safe to say that fully one half of these, and fully one-half of their inhabitants were destroyed by the terrific earthquakes. Had it not been for the survival of these members of our race, these inconsiderable numbers of cultured, civilized people (I was about to say superior, but we know now that there is no "superior" race, that all, if given the same opportunities would be equal) the plight of humanity would have been hopeless, man never could have faced and conquered the terrible future, the inconceivable terrors and obstacles he was doomed to meet, and humanity would have reverted to what we then called savagery—to ignorance, barbarity, a bestial state—and would soon have been exterminated, for a large portion—at least seventy-five percent of those who dwelt above the two thousand five-hundred foot level, were barbarous, uncultured, hostile, cruel, primitive and nomadic people—the Misguided Ones as we now call them—who soon would have lost what little culture they possessed and would inevitably have succumbed to the strange and terrible changes that were brought about, thus leaving the earth devoid of human life. But fortunately for our race and for humanity, many of our ancestors' great institutions—astronomical observatories, colleges, factories, and countless other accessories of civilization and learning—were beyond reach of the devastating floods and were saved. Also fortunately, as it turned out, many of the great radio-telegraphic stations were beyond reach of those tides so that—in due time—the various isolated groups of our people were able to communicate with one another, though not for years—generations—were they able to meet and join forces. Neither did we learn until many years had passed and the moon had once more become sane and had settled into its accustomed course and men were capable of moving towards the sea and of once again voyaging over oceans, not until then did we learn of what changes had taken place on earth and sea. If you, my readers, will examine one of the maps showing the surface of the world in those ancient days, and will compare it with one of our world of today, you may realize the transformation that was produced. But to us it was even more marvelous, more amazing, more incredible. The irresistible waves, rushing mountain-high over the lower land, cut, scoured and washed away deserts, plains, valleys and hills. Wherever there were large rivers the tides rushed inland along their beds, transforming the streams to great troughs in the surface of the land. And as each of the stupendous waves receded, it carried with it the material it had wrested from the land and deposited it elsewhere—at times on the bottom of the oceans, at other times in distant spots on the shore. Also as the lower lands were washed and torn away by the incoming crests of the great waves, they were transformed into great bowl-like depressions that, filled with water, became immense estuaries, gulfs, bays and inland seas.

NORTH of what was then Europe there had been a group of islands known as Great Britain, a densely populated, industrious, prosperous land, one of the great powers of the world and the seat of vast manufactures, vast transportation systems, of wealth, culture and business. Yet after the passage of those tidal waves nothing remained above the sea but a few isolated, craggy, barren rocks. Upon what, in the older maps, is marked "Europe," the alterations were even greater. Those countries, then known as France, Holland, Belgium, and Denmark almost completely vanished, and the sea flowed and surged over hundreds of thousands of square miles of what had been prosperous farms, vineyards, fields, great cities and hives of teeming industry. And where a river, known as the Danube, had flowed, the tides had gouged out a great strait

fifty miles in width, transforming Italy into an archipelago of low inlands rising in spots to lofty volcano cones, and forming a labyrinthine marsh where much of Germany, Austria and other countries had been. Even that vast land called Russia, with its teeming millions, whose warped minds and views had threatened the peace of the world, was now almost depopulated, its cities submerged, and, with the highlands that remained, separated by great areas of quagmires, of estuaries and of salt lakes. China, the seat of the yellow men, was much the same. Between what had once been Spain and Africa the débris had piled up, until the two were joined by a range of hills and dunes, while eastward, the former Mediterranean Sea had been altered to a mere estuary of the Indian Ocean. In northern Africa there had been the greatest of the world's deserts known as the Sahara, but this had become a portion of the ocean. In the western hemisphere the changes were as great, if not greater. Of that richest of the world's nations—the United States—little remained. A long mountainous archipelago stretched north and south, marking the former Alleghany Mountains and rising above vast mud-flats, bare at low tide. West of where the great Mississippi River had once flowed was a vast marsh with great inland seas and salt lakes stretching to the Rocky Mountains. Southward land no longer separated the eastern and the western oceans, for only upjutting, rocky peaks of desolate islands, and the saw-toothed ridges of the higher mountains rose above the sea. Of all the fair islands that once had dotted the Caribbean Sea only wave-washed rocks remained. The stupendous walls of water, roaring into the mouth of that once mightiest of rivers, the Amazon—had piled up, had swept inland across the South American continent, and breaking in titanic surf against the eastern slopes of the Andes, had gone rushing, roaring back, following the low lands, the river valleys, only to be met half way by another and another incoming tidal wave. The maelstrom created had scoured fathomless holes in what had been Brazil, had piled up vast ridges, had created islands, and had left what had once been South America an unrecognizable ocean dotted with new islands, some of continental size. Only the mighty Andes had remained but little altered; but even they remained, not as a mountain chain rising above deserts and jungles, but as a narrow, lofty peninsula—like the backbone of some gigantic monster—stretching for five thousand miles from north to south. And of course, with this tearing away of the land for millions of square miles in some places, immense new lands had arisen elsewhere. Much of the detritus, to be sure, was deep beneath the sea. Areas that before had been many miles in depth had been filled until they were shoals, and in other spots huge islands—small continents—had arisen from the sea, also in many places, islands, not too far distant from the mainland, had been connected by débris piled up by the waves, until they formed integral portions of the neighboring continents. All of these transformations of the surface of the earth would have been enough to have changed climates everywhere. But in addition, the great ocean currents had been completel yaltered. That known in my youth as the Gulf Stream—a vast warm oceanic current that flowed northward along the eastern coast of North America—had vanished as soon as there was no barrier for the ever-westward flowing equatorial waters piled up by the trade winds and the centrifugal force of the earth's rotation.

Another great current, known as the Humbolt, that carried the cold waters of the Antarctic northward off the western coast of South America, had been diverted and lost in the mid-Pacific, while the increased temperature of the earth's atmosphere had caused the polar ice-caps to melt and break up, and stupendous currents of cold water filled with floating masses of ice, flowed southward over what had been North America, Europe and Asia and northward over what had once been Australia, Africa and India. For a time all the world—oceans and land, equatorial regions and polar regions—must have been in a chaotic, unsettled state, during which countless forms of animal and vegetable life perished, but so occupied with their own problems were the minds of the few human beings who survived, that no heed was taken of such matters, and it was many years after they had taken place ere anyone knew the whole truth.

By this time, the areas of land and water had become fixed, fully established, the new ocean currents had settled into definite courses, and vegetation, as well as animal life, adapted to the altered conditions had been developed, so that a person who had not known the world as it had been previously, would have thought it always had been as it now was. By that time, too, the moon had once more dropped into a fixed orbit and no longer ran wild. While it still remained far nearer the earth than formerly—barely ninety thousand miles distant—and presented its formerly invisible surface to us (as it does today) its first mad speed had decreased until it required eighteen hours (18.03786 is approximately exact) for it to make a complete circuit of the earth. As everyone knows this resulted in our new and simpler lunar calendar of four hundred and eighty-six days (nine months of fifty-four days each) thus doing away with the clumsy arrangements of our ancestors in which the sun days were counted, with the result that their months were of unequal length and an additional day had to be added every four years.

Naturally these changes in our satellite affected the tides, so that today we deem our two-hundred-foot tides normal, although before the moon ran wild a twenty-foot tide was considered enormous.

But, as I have said, all this was far in the future, when, on that day, I rummaged through the houses of the deserted mountain village, and packed the needful things in prepartion for our long journey to distant Rincon.

CHAPTER IV

What Is a Superior Race?

THERE is no need to record all the incidents of that journey. It was no different from any similar journey over the high Andes, barring the greater difficulties caused by the results of the earthquake and the llamas.

I had always heard that only a native Indian could handle those beasts, and after several hours of futile efforts to control them I was convinced that it was quite true. Then, quite by accident, I discovered that the donkeys could drive the llamas far better than myself. With the long-eared creatures trotting close behind them, the llamas fell into line and became as orderly as a company of well-drilled soldiers. Very probably their Indian masters had been accustomed to riding the donkeys as they drove the pack-animals or perhaps they always drove them with the burros in their rear.

Whatever the reason, we had no more trouble on that score. Neither did the results of the earthquake cause us a great deal of difficulty—not nearly as much as I had feared. For one thing, we were traveling along a summit or ridge where nothing could have tumbled from above and, moreover, the ridge was of dense, solid basalt and had not been riven or split to any great extent. Here and there masses had dropped away leav-

ing the trail narrow and rather dangerous, and now and then we came to small cracks. But by picking our way with care and making detours, we were little delayed. We slept wherever night found us, in sheltered gulleys or on the bare mountainside, for while caverns were numerous I had no mind to be caught in one in case of another quake and thus find ourselves bottled up in a cave. Ordinarily we would have suffered from the biting cold night air of these altitudes, but even at night the air was warm and balmy and we needed no coverings to protect us from the cold. Our greatest trouble was the rain that fell in a steady penetrating mist, like a dense fog, each time the moon raced overhead. And so easily do human beings accustom themselves to the most astounding matters, that, after the first two or three days, we gave but little heed to the great orb which twice every twenty-four hours came hurtling up from the east. Indeed, I believe, had it not risen, we would rather have missed it and would have felt more troubled at its non-appearance than at its appearance. In fact we had begun to take it as a matter of course, and I noticed that each time it rose it showed a different portion of its surface. When it passed, rushing overhead, in the evening we saw the old familiar moon—though vastly enlarged of course—with its craters and forbidding desolation; but each morning—if moonrise could be called morning—we saw the opposite surface with its continents and seas. Also, I noticed—although for the first few days I failed to observe the fact—that it appeared a little later each time. Either the satellite's speed was decreasing, or else it was moving farther away, but as I could see no diminution in its size, I decided the former was the case. I knew that the first time I had seen this huge mad satellite, it had appeared above the Andes at a few moments after seven (of the old time) in the evening. I was then at sea level and the moon had risen back of the Andes, so that—from the height we were now at—it would have appeared some appreciable time earlier.

Also, on that first morning when it had so terrified us as we cowered above reach of the awful tidal waves, I had looked at my watch (having thought the rapidly increasing light was approaching dawn) and had noted that it was barely three o'clock. At realization of this I gasped. Why on earth had I not noticed the fact before? In that first twenty-four hours, the racing moon's speed must have dropped nearly one-half! It had completed its first circuit of the earth in approximately eight hours. Its next circuit had taken about fourteen hours! And now, by timing it, I determined that it was completing its orbit in sixteen hours, and that each day, it lost several minutes. What the result of this might be, I could not foresee. But it reassured me in a way, for I reasoned that if the satellite's speed continued to decrease, it would not be very long before it had dropped back to its normal orbit as far as time was concerned.

There was another interesting feature of the phenomenon, too. Of course, it was too soon to verify my conclusions by observation, yet even I, with only a casual knowledge of astronomy, could understand that if the moon went through its familiar phases, they must recur much oftener than before. I tried mentally to calculate how frequently, but gave it up as far as accuracy was concerned, and decided that, roughly, the moon should wax and wane about every two weeks if it continued to hold its speed. As it had been full when it had first begun its mad pranks, I found—as did Isobel—a great deal of interest in watching for an indication of its waning. This was evident within the first two or three days, and by the end of the first four days, nearly half of the planet had lost its vivid color and appeared as a globe, partly silver and partly burnished gold. Yet it never became really dark nor did it, as formerly rise and set later regularly each day. It rose later each morning but skipped about in seemingly most erratic fashion. Thus the first day it had appeared at 7 in the evening and again at three in the morning. A day or two later it had rushed into view earlier in the afternoon and much later the following morning (some time after sunrise). Then it had not appeared until quite late at night and not until late in the afternoon of the next day. And now it was popping up at ten at night and again at two the next morning.

IT was some time before it dawned upon me that this naturally would be the case if the moon was slowing down, and at the same time I realized that if I had not been terrified half out of my senses, I should have noted the time that elapsed between its rising and setting, if I was to get at any definite decision regarding its actions. But it was too late for that now, and as long as I felt assured that its erratic behavior would not threaten greater dangers than we had passed through, I was quite satisfied to devote my energies and my mind to the more practical and concrete affairs that we faced. Several times we came to villages, but all had been deserted, although in some we found the inhabitants had begun to straggle back. And I was greatly interested, and amused—though scarcely surprised—to find that the Indians, who had (ostensibly at least) been good Christians, had all reverted wholly and openly to their ancestral sun-worship. In the great racing sphere that had burst into view they had failed to recognize the moon, but deemed it the sun-god, Inti, the offspring of the sun, who was coming to earth and seeking a safe landing-place (they had seen airplanes and had noticed how they circled and raced above the land seeking a landing spot) and they felt positive, as they assured me, that with the arrival of their sun-god they would regain all their ancient power and would be again ruled by an Inca as of old.

I could scarcely blame them for their belief for, after all, their theory to account for the phenomenon was scarcely less credible than to believe that the moon had run wild.

The Indians, however, were a great help to us. From them I secured guides, men to drive the llamas, and servants, and without mishap we came in due course to Rincon. The meeting between Frank and his wife and daughter need not be described. It was more than dramatic, for he, tortured and torn with anxiety, feeling assured that his family had been wiped out by those vast waves or the earthquake, had gone almost mad and had practically given up all hopes, for he was well aware—as were all others at Rincon—of the terrible catastrophe which had occurred. In fact, they knew vastly more of the results of the tidal waves and quake than I did. At Rincon there was a powerful radio-telegraph station, and Frank had incessantly been sending out calls asking for details of the world disaster. To be sure, only those stations that were at altitudes of more than two thousand feet had survived, and owing to atmospheric and electrical conditions, known as *static*, no communications had been received from distant stations. But several of the nearer posts were within sight of the lowlands, and their reports of the wholesale and complete destruction confirmed Frank's worst fears. There was but one slender, one faint chance which he clung to. The station at San Pablo (which was now isolated on a rocky island rising from a sea of turbulent waters) reported that it was believed many refugees had fled to the mountains in time to be

saved as several hours had elapsed between the outrushing sea and the returning wave. Brave fellows! They knew their own doom was sealed, that, cut off from all the rest of the world, with only limited supplies for a few days, they must soon succumb to death by starvation.

Yet to the very end they continued to keep up communication and to report all that was taking place. And by the merest chance their lives were saved at the eleventh hour. It happened that an airplane had been partly wrecked in making a descent on the high plateau or *puna* a few miles from Rincon, and when the weary, wounded aviators reached the town and learned of the plight of the San Pablo radio station, they heroically declared that they would patch up their machine, and despite the fact they were short of fuel, would attempt the almost suicidal flight to rescue the marooned men.

The Almighty must have guided and protected them, for not only did they make the attempt, but by a miracle they succeeded in landing on the rockstrewn slopes of San Pablo, and with the starving men they had saved, they took off in safety. Their fuel tanks were dry when they reached Rincon, and had they been forced to fly another mile, they would inevitably have crashed and their magnificent heroic efforts would have been in vain. But theirs was but one of the almost superhuman feats that were accomplished, though at the time we of Rincon knew nothing of them. Scattered throughout Peru and elsewhere in the world that had not been overwhelmed were many airplanes, and while no human beings remained upon the lowlands after these had been swept by the tidal waves, yet there were many isolated communities and even individuals whose lives were saved by the daring men of the air. And later these machines served a most valuable purpose in maintaining a more or less regular communication between the various groups and companies of our race who, though safe and able to subsist indefinitely in their lofty environments, were completely cut off from one another. But of course all this took time—weeks, months, years—for a long period everyone was devoting every energy to organization, to readjusting themselves to the new problems, the new life they faced, and to planning for the future; providing for food to support the people who now were dependent entirely upon the resources of the highlands, and to protecting themselves from the lawlessness of their fellow men. But all of this is matter that should come later.

AS I have mentioned before, many of the world's greatest astronomical observatories were—for the sake of the clarity of atmosphere—situated at high altitudes. As a result, the scientists in charge of these were able to watch the antics of the moon and to draw conclusions. One such institution was near Rincon and from the scientists in charge we learned details of the phenomenon and were informed of the conclusions and the theories that had been formed from their observations.

All agreed that the cause of the moon leaving its orbit was inexplicable. No one had noticed the satellite when the sudden alteration had occurred. It had simply leaped—there is no better term—from its path, had come hurtling towards the earth as a rapidly reddening sphere and had gone madly racing about our planet at terrific speed. Very possibly, some scientists declared, the sudden change had been caused by the moon colliding with some dark unknown planet of small size or even with some enormous aerolite which, upsetting the moon's equilibrium, had thrown it from its orbit. That such a collision would not have been revealed by the flash of light, even the complete incandescence of the planet, was, they stated, explained by the absence of atmosphere on the moon. But at this, other scientists at once reminded their compeers, that it was now known that the moon must possess an atmosphere, and, they asked, why was no scar, no new crater or other indication of the collision visible upon the moon?

No doubt, retorted the sponsors of the theory, the impact took place on one of the continental areas or one of the seas on the heretofore invisible surface of the moon. In fact, they went further and avowed that these seas, the atmosphere of the moon had all been created by and were the direct result of the theoretical collision, the impact having generated oxygen, hydrogen and nitrogen, thus surrounding the moon with an envelope of these gases. In fact, they became very much enthused over their theory, and suggested that it was the presence of these atmospheric gases that had caused the lurid color of the satellite and even its erratic behavior. However, nobody cared in the least whether one theory or another was the correct one. What we all (and of course by "we" I mean only that comparatively small community that survived in the Andes of Peru) what we all wanted to know were facts not theories. We wanted to know what to expect, what lasting effect the alteration of the moon's position and orbit would have upon the earth and upon ourselves, what the climatic and other changes would be, and whether it was scientifically probable that the moon would gradually fall back to its old routine or would remain forever in its new orbit.

To our chagrin and disgust, the astronomers could give no satisfactory replies. They could guess, could surmise, could theorize but could not say definitely what might or might not happen. They did, however, determine that the moon's orbital speed was decreasing (but I had done as much myself) and they plotted its orbit, which as far as I could see was of no practical value. Also, they determined its distance from the earth and announced that it did not reduce that distance—which was comforting, as we still feared that the insane planet might suddenly decide to bang into the earth.

Also, they agreed unanimously that the change in climate was directly attributable to the moon—which everyone had already assumed—and they prophesied (as eventually it turned out) that the atmosphere would in all probability become saturated with moisture owing to the far greater evaporation caused by the increased temperatures over all the earth and the greater areas of water that would in all probability (they did not then know that this actually was the case) be spread over the surface of our sphere. But they fell far short of their expectations in this matter and did not foresee that for years to come—for generations—the greater portion of the earth's surface would be blanketed in an impenetrable fog and that only the higher altitudes would ever be bathed in bright sunshine. Neither could they foresee what terrible results would follow this universally increased warmth and humidity, and while they could not say definitely why the moon's nearness should heat our atmosphere, they were fairly well agreed that it was the result of the sun's light and heat reflected from the surface of the moon as if from a stupendous mirror.

Taken all in all, we found that the astronomers—and for that matter the other specialists in various sciences—were about the most useless and superfluous of the survivors of our race. They had so long been accustomed to working our problems along established lines and to basing all their calculations and assump-

tions upon recognized and apparently fixed laws, that now, when all fixed laws and established ideas had been knocked topsy-turvy, they were at a total loss. In thus referring to the scientists—who were, thank the Lord, comparatively few—I do not intend to include such as the engineers, the architects, the metallurgists, the geologists and others who had acquired knowledge through practical experience. We were forced to depend very largely upon these men and they were unfortunately, very few in number. But the men on whom we should have been expected to rely—the naturalists, the botanists, the astronomers, the psychologists, the thousand and one other "ists"—simply fell down when it came to practical and useful knowledge and advice.

Perhaps I should not blame them overmuch. Looking back upon those days, I realize that we were all "raw" as the old saying had it. We were all very nervous, all had lost friends, families or dear ones. We were kept in a constant never-ending state of tense expectancy, not knowing what might occur next, and we were faced with terrific problems. And also we all had a tendency to revert to primitive conditions, to drop our veneer of culture and civilization and go back to nature. In fact, I think it speaks more eloquently of our civilization than anything else that we did not all revert to our ancestral types. Some did, but on the other hand, many primitive people went as far the other way, so that in the end civilization was triumphant.

But I am getting ahead of my narrative and am digressing. I must go back to those earlier days when the little, exiled community at Rincon began to plot and plan and discuss matters in view of the future.

Oddly enough, nobody seemed to doubt or to question that there *would* be a future. We all seemed to take it as a matter of course that we would live, that we would increase and spread, and that eventually the world would go back to normal. Later we learned that exactly the same feelings prevailed in every isolated community throughout the world. But, of course, at that time we did not know there were any communities outside of the narrow limits of the Peruvian Andes. And it was a number of years before we had gotten into direct communication with these various local groups and had become so organized that we could work in unison and could form a more or less homogeneous entity. And here I must digress again to mention the strange fact, that in many respects the hitherto somewhat despised Indians, the supposedly "inferior" natives, took the real initiative.

It was an Indian—though to be sure a most unusual and exceptional Indian—who really paved the way for the survival of our race and our ultimate triumph.

It was the Indians upon whom we had to depend for traversing the mountains and tilling the soil, locating other communities, and often it was these people who successfully combatted the dangers that later on beset us and threatened to eliminate our race. And it was this, or rather, these facts that taught us that our preconceived ideas of "inferior" people were all wrong, that a supposedly "superior" man may abruptly change places with his "inferior" fellow, if his environment is suddenly altered, and that the superiority or inferiority of any race (I do not mean the individual) is wholly a question of opportunity, of environment and of conditions.

If we had accomplished nothing more than to learn this now universally recognized truth in respect to our fellow men, I feel—after all these years—that the terrible catastrophe to the world was not in vain and perhaps was the best thing that ever happened to mankind.

We at Rincon numbered—Indians and others—less than five hundred all told, and of this number not more than one-half were of the so-called white race. Fortunately it had been a rather important little center, in the heart of a rich mining area, and there were abundant food supplies and other necessities in the town. One of our first cares was to organize a sort of vigilance committee (for the native officials had lost practically what little wits they had possessed) in order to enforce law, order and sanitary arrangements, and to take charge of all supplies and see that they were guarded and so apportioned as to last as long as possible. Personally I occupied a rather prominent place in all arrangements, both at Rincon and elsewhere, not because of any superiority of intellect or experience, but largely because I was, as far as known, the only man who had escaped from the lowlands, and also because I was well known throughout the country and not only had dealt a great deal with the Indians but spoke their language fluently. Moreover, I was the "oldest"—how amusing is it to use that term after centuries have passed—and so was considered more capable of unbiased and of mature judgment than were the younger men.

Our inspection of the supplies proved that with care we need not fear famine or other hardships for at least six months, and we were confident that in the meantime we could plant crops and could provide for the future indefinitely. Fortunately many of the crops of the Indians that had not been harvested were not injured by the change in climate. The maize was even improved as were the potatoes; the barley and wheat seemed not to have suffered, and many fruits and vegetables that hitherto grew only in poor stunted forms or with the greatest difficulty, now flourished and bore luxuriantly.

Also, by the time we had organized, we had learned of other communities not far distant. To be sure the great mining centre of Cerro de Pasco had been completely obliterated by the earthquake and avalanches. Huancayo and Ayacucho had been utterly destroyed and few survivors were left, the melting glaciers and snow-caps on the peaks having flooded the rivers, which in turn transformed the interior valleys to great lakes, while Cuzco, the ancient Incan capital, had been practically eliminated by the overflowing of the Amazonian tributaries, when the great tidal waves had forced that mighty river back to its very sources. The same was true of every town of any importance on the eastern flanks of the Andes, and La Paz—or rather the bowl-like valley in which it had been—was now a deep, calm lake—an extension of Lake Titicaca.

Taken all in all, the loss of life and the destruction of cities and of property in the mountainous districts was greater in proportion to the original population than on the lower lands just above the tidal-wave damage. We were, of course, judging only by Peru, but later we found the same conditions everywhere. In fact, eventually, when we were able to get into touch with others of the survivors in the Andean regions, we found there were less than twenty thousand (not including Indians) many of whom ultimately perished. Yet it was this remaining handful that was the real nucleus of our present-day civilization, and we accomplished more, triumphed over greater odds and more greatly benefitted the human race, than did all the other four million beings scattered over the entire western hemisphere, and, I think, we did fully as much as was accomplished by all the remaining inhabitants of the earth left alive after the tidal waves and earthquakes had taken their toll. This, however, was not due to any superiority, to any efforts of our own. It was largely the result of chance, of my own credulity, of an ancient superstition, and of my familiarity with the

Indians and their beliefs, history and dialects. No, there was one more and even *most* important factor—that magnificent character, that benefactor of humanity—the Inca, Chukis Huaray—whom every living man, woman and child reveres almost like a divinity. Neither must I forget those two heroic men—Grayson and Ellis, without whose magnificent courage and sacrifice our people would have been totally exterminated.

But once more I am digressing. I find it hard, indeed, to adhere to the thread of my tale as memories, sweet and sad, crowd upon my brain, as outstanding events and trivial happenings obscure the continuity of my thoughts.

So I had better begin once more and, omitting all the routine and the duties, the acts (important at the time but of no real interest now) the thousand and one details, the daily life, the hopes and fears; in fact, the intimate, monotonous history of the weeks, months and years that followed my arrival at Rincon, plunge at once into those stranger, more dramatic, less known and infinitely more important occurrences that followed.

CHAPTER V

The Tree of Life

ONE of the first great changes that we noticed was the vegetation. Within a very short time green things were springing up on every side as if by magic. Even upon the highest mountain tops—where huge glaciers and snow masses still remained—plants began to grow at the very edges of the melting ice. Every crevice and cranny seemed to spring into life. There was no spot so bare, so barren, so apparently devoid of soil or roothold, that plants of some sort did not grow. Mosses, maiden-hair and other ferns spread rapidly over the rocks, vines began to clamber over the sheer precipices; where there were gulleys or tiny basins filled with detritus, shrubs and trees shot up miraculously and began to form dense jungles. And in the high mountain valleys, along the river beds and on the stony wastes or *punas*, rankly luxuriant tropical vegetation rioted. Where the seeds, the spores or the tubers came from, was a mystery. Perhaps they had been there—dormant but living for thousands of years. But inexplicable as it was, the fact remained that in a wonderfully short time the once bleak Andes were magnificently green and as heavily verdured as the tropics in the old days. And with the vegetable growths came living things—reptiles, insects, strange birds, and quadrupeds. Some were those to which we had become accustomed in the lowland jungles and had probably escaped destruction by taking to the hills, but fully as many appeared to be new forms we had never before seen, though doubtless they had existed in the remoter unknown portions of the land. Also, of course, among the innumerable growths were many seeds, nuts, fruits and vegetables, which, for all we knew, might be most useful and important to our lives. Yet the one among us who was a botanist—or supposedly so—could give us little information in regard to the things. Some, to be sure, he recognized—as did everyone else—but in the case of most he was as much at a loss as any of us. He "thought" this or that might be edible as it was related to some edible species. And he "thought" others were injurious as related species were known to be. I reminded him of the fact that one species of manioc was poisonous and a closely related species was not, and that the poisonous variety could be rendered edible and nutritious, and I pointed out that cashew seeds would take the lining off one's tongue and mouth when raw but were delicious when roasted, and I asked him why he should assume therefore that because one thing was edible or poisonous, a nearly related species should necessarily be the same. He could give no answer and sarcastically suggested I should test them out by eating them. To this I rather hotly retorted that I wouldn't object to trying them on him.

As I had always understood that a monkey could be depended upon to select edible from inedible vegetables and fruits, I set out to capture one of the beasts, and after a few tests and trials, decided we could depend upon his instinct in every case.

As by this time matters in our community were running fairly smoothly—and I must remind my readers that to all intents and purposes we were living in a little world of our own—and as I had had a great deal of experience in exploration work and seemed best fitted for the undertaking, I devoted most of my time to exploring the mountain and high valleys, searching for new and useful plants—as well as for any possible communities of people—and incidentally endeavoring to locate some extensive fertile and otherwise desirable valley at a lower level than Rincon. The altitude of Rincon did not agree with many of the people. There was comparatively little land fit for cultivation in the vicinity, and all had agreed that if the community was to survive and increase and prosper, we must move to a more favored spot.

Very often these explorations took me considerable distances into the mountains, and quite as frequently I came upon isolated villages of Indians who had, I noticed, invariably reverted to their ancient faith and customs. All, however, were quiet and friendly, and as I spoke their tongue and fell in with their customs while among them, I got on famously. So, on one trip, as I pushed my way through a dense growth of tree-ferns and thorny palms filling a narrow cleft in the hills, I was not surprised to hear the distant sounds of music and voices. Expecting to find a small Indian village, I pressed through the last of the jungle and stood transfixed. Before me stretched a magnificent, verdured valley which at my first glance I realized was the ideal spot for which I had searched. But it was not the valley with its sparkling river, its groves of great trees, its well-tilled fields, its grazing flocks and herds that held my eyes. Within it was a city—a city of stone buildings surrounding a pyramidal mound or hill topped by a great stone temple.

In every detail it was the counterpart of the ancient, pre-Incan cities with whose remains I was familiar, cities in ruins and deserted. But the city before me was not in ruins and it teemed with people. That local, present-day Indians had taken possession of a prehistoric city was my first thought, although it was most unusual and remarkable that they should have done so. But my second glance assured me that these were no local, ordinary Indians. Even from the place where I stood I could see that. The throngs that, in a long procession, were moving towards the temple on the mound, were clad, not in the garments of the modern Indians, but in the costumes of the Incans. All the men wore the short ornate tunics, the full cotton trunks, the feather leg-bands, the gleaming ornaments of silver and gold and the turban-like llantus or head-bands, twisted into an ornamental knot above the forehead, all the decorations of centuries long past; and all the women wore the equally ancient dresses and costumes of Incan days. What *did* it mean?

Had I by chance stumbled upon that legendary, supposedly mythical hidden city of the Incas? Before I could find a mental answer to my question the procession had reached the base of the temple-mound. It

divided into two columns that halted, one on either side of the wide street, chanting and singing to the music of *quenas* (Indian flutes), drums and horns.

Then, through the lane thus formed, a group of figures passed, and ascending the mound, stood before the temple doors. No second glance was needed to tell me they were priests of the sun, and that the tall, splendidly regal figure, with his headdress of gleaming gold and flashing gems, was the chief, the king of this city. He might have stepped bodily from some ancient sculpture or tapestry, for in his person I saw the living reincarnation of the Inca. I turned to my Indian guides. But both had fallen to their knees, and with heads bowed to earth, were rendering obeisance to what they had seen in the hidden valley.

BEFORE I could frame a question, a mighty chorus of chanting voices came from the city. Above the forested hills the full moon, a glorious sight now that it no longer inspired terror, was rising majestically, like a great shield of burnished gold. It was late afternoon and the ruddy glow from the great satellite bathed the valley in soft, rosy light and imparted a golden tint to the temple and the buildings of the city. With one accord the waiting lines of people threw themselves upon the ground and bowed their heads. The group at the temple doorway raised high their arms as if in supplication to the planet. Then they, too, dropped to their knees and made obeisance. For a moment they remained thus. Then they rose and entered the place of worship, and as the reverent throngs rose slowly to their feet a thin column of smoke drifted upwards in a blue spiral from an opening in the temple roof. A deep sigh from my Indians broke the spell. They were gazing transfixed, a strange light in their eyes. But to my question they merely shook their heads. They knew nothing of the city and its people. But they were filled with vague superstitious fears, with subconscious memories of legends, traditions, of mysterious rites and the forgotten glories of their forefathers. And when, the ceremonies in the city over, I started forward to descend to the valley, they drew back, half-afraid, half in awe. Still, they followed, and presently we found ourselves in that city of the past.

No hostility was shown us. The people gazed at us wonderingly, but seemed friendly, and seeing one whom by his dress I took to be an official of some sort, I spoke to him in Quichua and asked to be conducted to the ruler.

He replied in the same tongue and led the way to a large stone building, at whose massive portals stood two armed guards. But I had no need to ask permission to enter. They seemed to be awaiting me, and leaving my Indians outside, I stepped through the doorway of the palace.

As I had moved through the streets I had noticed that the buildings were ancient but had been repaired and renovated within comparatively recent times, and as I entered this massive stone structure I saw with a glance that it had not been in use for very long, that beneath its fresh coating of stucco and its multicolored frescoes were evidences of long disuse and of the ravages of time.

But I had little opportunity to note these facts. I had entered an inner court or patio filled with flowers and shrubs, with bright-plumaged birds in wicker cages, and with a milk-white llama standing at one side.

Seated upon a bench covered with gorgeous robes was the man I had seen upon the temple steps. Though he had discarded his ceremonial dress and was clad in the simple costume of the other people, his commanding presence would have identified him instantly. And the crimson fringe or *borla* (a tassel) that fell from his knotted *llantu* over his forehead, and the great shell-shaped golden pendents that hid his ears told me that he was a man of royal blood, that he was recognized by his people as a son-of-the-sun, a reigning Inca. Yet at the time I was scarcely conscious of these details, these accessories, for all my thoughts, my mind were concentrated upon his person and his face. As he rose to greet me, he stood taller than myself. A magnificently-formed, powerfully-built man, broad-shouldered, deep-chested, lithe, muscular and erect. And his face, his features, were those of a king—almost those of a god, I might say. His broad, high forehead spoke of tremendous mentality. His soft, expressive eyes seemed filled with the wisdom of the ages. His straight slightly aquiline, finely-chiselled nose gave a proud, keen expression to his face, and his thin, firm lips flickered to a friendly smile as he welcomed me.

In as few words as possible I explained who I was, what I was doing, and inquired about the city and his people. For a space he sat silent, deep in thought. Then he spoke. "My lord," he said, "asks many things. Know you then, that I am the Inca Chukis-Huaray of the Panaka clan, and that here in this valley of *Chincana*[1] and in this city of *Achupa*[2] my people dwelt and my fathers ruled in the days before the Bearded Ones came unto the land of *Tahuantisuyo*[3]. And by them the land was laid waste and my people destroyed and enslaved, as my lord knows. But it was prophesied by the Holy Ones in the days of the Inca Wira Kocha that when Inti, the sun-god, once again should be born and should flame in the sky, then would my people rise and own the land and dwell within the cities of their fathers and should be ruled by an Inca of the house of Panaka. And behold, my lord, it has come to pass that once again Inti rides through the sky." He pointed dramatically upward to where the great, gleaming moon was riding high in the evening sky. I was beginning to understand. These people—whoever they were—had mistaken the moon for the sun deity (just as had those other Indians throughout the mountains) and they were associating the phenomenon with some ancient prophecy. But who were they? Why were they here in this ruined city?

The man who called himself Inca Chukis-Huaray was explaining. "So, my lord," he continued after a moment's silence. "When once again, as foretold, Inti appeared unto us, I, the Inca, summoned my people from far and near and led them to this city of Achupa that we might dwell again in the valley of my fathers and might worship Inti as of old, for the prophecy has come to pass, even as I had it from my father, the Inca Amaru-Huay, who had battled under the banner of *Manco*[4] with the Bearded Ones, and who died in the year of *Mosoc-Nina*[5] when I was but a young man."

I gasped. What was this splendid fellow talking about? What did he mean by calmly telling me that his own father fought with the Inca Manco in that memorable seige of Cuzco four centuries before? And what was this he was telling me about having been a young man when his father died in the year of *Mosoc-Nina? Mosoc-Nina*—that would have been—I did a quick sum in mental arithmetic—Good Lord! That would have been one hundred and seventy-five years (of the old sun count) ago! And here was this Inca—a man in the prime of life—deliberately and in all seriousness in-

[1]Chincana—Literally a place of labyrinths.

[2]Achupa—Divination or Prophesy.

[3]Tahuantisuyo—The Inca name for their empire. Literally "The Four Corners of the Earth.

[4]Manco—The heir to the Incan throne who rose in rebellion against the Spaniards in Cuzco and besieged the city for a year and nearly annihilated the conquerors in 1535 A.D.

[5]Mosoc-Nina—Literally New Fire about the year A.D. 1760.

forming me that he was a young man nearly two centuries in the past! Was he mad, was he romancing or was he merely speaking allegorically? My curiosity got the better of me.

"But tell me, O mighty Inca of the house of Panaka," I said, "if thy father fought under the rainbow banner of Manco in the year of Kori-Huayta[6], how could he be yet alive in the year of Mosoc-Nina? And how couldst thou, O great Inca, be alive today, if thy father told unto thee the ancient prophecy ere he died in that far-distant time?"

The Inca smiled. "I wonder not that my lord asks this," he replied. "But my lord is of the race of the sons of Wira Kocha[7], the Bearded One, and he knows not the secrets of the Children of the Sun. Yet will I reveal them unto my lord, for it was foretold in the long ago that even this must come to pass. In this land of Tahuantisuyo, my lord, there grows a tree that is the Tree of Life and he who eats of the nuts of that tree is blessed with years not given unto other men. Mayhap my lord, who knows much of my people's story and of my people's tongue, knows that but thirteen Incas sat upon the throne of Tahuantisuyo between the coming of Manko Kapak and the death of my uncle, the Inca Atahualpa. And yet, my lord, twice *Toricuk-Kamachicuk*[8] years had sped during that time."

I GASPED. Always that fact to which he referred had been an archeological puzzle. All scientists agreed that the old Incan Empire must have endured for fully two thousand years, and yet, according to Incan history and tradition, there had been but thirteen Incas and two of those had reigned together. But if—no, that was too incredible. If, I was about to say, each Inca had lived for one hundred and fifty years say—no, I could not believe that. A man might—once in a great while—live to such an age, but as a regular thing—impossible! And what was this nonsense about the Tree of Life, whose nuts endowed the eater with abnormally long life? What strange allegorical myth was this that the Inca was relating to me? Of course, it was a myth, but it was new and interesting.

"And where, O mighty Inca, is this Tree of Life?" I asked. "And why, if the people of thy race know of it, do any die?"

The Inca smiled and his eyes seemed to search my soul as he gazed fixedly at me. "My lord doubts my words?" he said half-questioningly. "Yet to my people—to my fathers—the great machines that fly through the air, that the Bearded Ones build, would be more incredible than the Tree of Life to you, my lord. And the nuts of the trees give not everlasting life nor do they save one from death through violence or sickness. Nay, they but give longer span of life to whosoever eats of them. It was a gift from the gods, my lord. Aye, it is told in the legends of my race that the tree was given unto the great Manko-Kapok by the divine *Wira Kocha* himself. And only those of royal blood know of the tree and of the powers of its nuts, for it is not well that the common people should be equal to the Incas. And, moreover, this tree bears its life-giving nuts but once in each *Pachacayok*[9].

"But this, my lord, is the year of *Puna-Salka*[10] when the Tree of Life will bear its flowers and its nuts, and I grieve that I have no son of the royal line that he may eat of the nuts and so live for two *Pachacayoks* or more to rule my people when I have passed to my fathers. Yet it was foretold, my lord, that with the passing of the last Inca of the house of Panaka, a man of the race of the Bearded Ones would come unto the land, and that his coming would be made known by the coming of Inti riding in the sky, and that to him and to his children and his children's children should the secret of the Tree of Life be made known. And it was foretold that, ever after, my people and the Bearded Ones should live in peace and should abide together and should mingle, and that in the end they should be all of one race and should rule the world—aye, even beyond the bounds of Tahuantisuyo. And now, my lord, thou hast come and the prophecy will be fulfilled. So, my lord, unto you shall I show the Tree of Life and unto this Valley of Chincana you shall lead those that you rule in Rincon, and peace and happiness shall abide and all shall eat of the nuts of the Tree of Life that all may live long and that their progeny may be great, and so will the prophecy of old be fulfilled, for Inti wearies of strife and war and battle among his children."

For a moment I was silent, actually awed, impressed by his words. Still they were, of course, purely allegorical. All that was of any real moment was the fact that he had given me permission to bring our community to this lovely valley. No doubt he realized that his small community would gradually disappear—they were not natives of the valley but had come there with their hereditary monarch when, to their credulous superstitious minds the sun-god appeared in the heavens, and they would slip back to their old homes and their old ways.

The Inca was a wise, far-sighted fellow, I could see. He had been in touch with white men and civilization, I felt sure; he knew perfectly well that there no longer was enmity between his race and mine, and with white colonists in the valley he and his people would be better off, more prosperous than by themselves. Yet there were a number of matters that rather puzzled me. In the first place, if these Indians had merely come here because of their religion and their faith in the reappearance of the sun-god, as they called the moon, how was it that they possessed all the costumes, the customs, the paraphernalia of Incan people? And why, after all, should this extremely intelligent and wide-awake king want to take the chance of debasing, ruining his people and losing his own prestige by having white men invade his secret domain, now that he and his race had, for the first time in centuries, an opportunity to regain their freedom, their former status and to worship their old gods in their own way without any interference?

The best way, I decided, was to ask him bluntly.

"The mighty Inca does not then fear the Bearded Ones?" I queried. "Does he not fear that if my people come to this hidden valley they will tread the people of Tahuantisuyo under foot and possess themselves of all? Does he not fear that even he, the Inca of the house of Panaka, will become but a vassal? Did not the Bearded Ones in the past destroy thy fathers' empire and enslave thy race? And why, O Inca, if thou and thy people have dwelt here only since the coming of Inti, dost thou and do they wear the garments of long ago and live and worship as in the days ere the Bearded Ones came into thy land?"

The Inca smiled. "As for that, my lord forgets that three years and more have passed since Inti flamed again in the sky and that much may be done in that time. And in secret places were stored many things that had been hidden from the Bearded Ones there to await the day when Inti, angry at those who had oppressed his children, should destroy them with his might and should cause the waters of the great sea to flow over their cities—"

[6]Kori Huayta—Golden Flower. The Incan year of 1535 A.D.
[7]Wira Kocha—The Great Wise One, the supreme divinity of the pre-Incas, known also as The Bearded One
[8]Toricuk Kamachicuk—One Thousand.
[9]Pachacayok—One hundred years.
[10]Puna Salka—Cold place. The Incan year of approximately 1934 A.D

Ha! I thought to myself, so he knows of the tidal-waves and the havoc.

"And I fear not—" he went on, "that my lord and his people will enslave those of my people who remain. Long ago did we of the race of Tahuantisuyo learn that there were many tribes of the Bearded Ones, even as there are many tribes of my race, and that some are evil and some are good, even as some of my race are evil and some good. And my lord and those at Rincon are of the good tribe with but few of the bad. Moreover—" he smiled confidently—"why should the Bearded Ones who now are few wish to harm those of my race who are now many? And why should they wish us evil when their lives and their progeny and their future depend upon us? Moreover, my lord, it is not for me to say why matters should be as they are. In the prophecies it was foretold that my lord's people and my people shall dwell together and mingle and be welded into one race; and as the gods will, so must it be done."

It is not essential to repeat in detail all the conversations that followed that day or the next or during the days that followed, while I remained in the valley. The Inca told me many things, much of the history of his race I had never before known, and he was firm in his conviction that the moon was the living manifestation of the sun-god, Inti, the offspring of the sun itself and the moon (Mama-Quilla) for he argued the moon had vanished, it was natural that she should not show her face for a space after having given birth to her divine sun so what better proof was required? While for a time I could not make myself believe that there was any truth in his story of the mysterious Tree of Life, nor in his assertions of his own advanced age and that attained by his father, yet gradually, as he accidentally let slip various statements, I found myself wondering if there was not something in it; if by some chance there might not be some nut that possessed marvelous medicinal properties which actually did prolong the span of human life. After all, I thought, there was nothing supernatural, not even incredible, in the story. Many of the medicinal plants in common use at that time aided, indirectly, in the prolongation of life. They cured or prevented diseases that had formerly killed countless thousands before their time, so why should there not be some medicinal plant that would prevent or at least delay the gradual advance of age and death from old age? And it was certain that—unless the Inca was a past master at deceit and subtlety—which I could not believe, he had himself lived for more than a century. Repeatedly, and apparently without realizing or intending it, he referred to occurrences or mentioned events that, I knew, had taken place from ninety to one hundred and fifty (of the old years) previously. Not only such things as great earthquakes, eclipses, and similar matters, tales of which might have been handed down from generation to generation, but petty, unimportant and quite local events.

So, by the time he finally announced that he would show me the Tree of Life, I had become almost convinced—in my own mind—of the truth of the almost incredible and seemingly preposterous tales he had told.

CHAPTER VI

Prophecies Have Come to Pass

Of course, today, we all know of the results that followed. We all know the revelations made to me by the Inca Chukis-Huaray were the literal truth, that the Inca was unquestionably the greatest benefactor of the human race who ever lived. And so accustomed have we become to living to what, in those days, would have been considered incredible ages, and we are so familiar with the cultivated Life Trees and their marvelous fruit, that my incredulity at that time no doubt seems as remarkable to my readers of today as the Inca's tale appeared to me at that time.

Yet I was not nearly as incredulous as were others. When I at last stood beside that handsome, fern-leaved palm, and gazed at the clusters of polished scarlet berries that gleamed like waxen fruits amid the foliage, I did not hesitate to eat them. And somehow—with my first taste of those peculiarly acidly sweet, pungently spicy, astringently aromatic but horribly evil-smelling palm fruits, I felt a most amazing and indescribable sensation. I felt absolutely convinced that, barring accident and disease, he who ate of the fruit of the Tree of Life would live three or four or perhaps five or six times the supposedly normal life of man.

And a wild idea came to me. If the tree bore fruit once in one hundred years why shouldn't a person, who had already partaken of the fruit, eat more and so go on living indefinitely? But when I mentioned this to the grave-faced Inca beside me, he smiled and shook his head and informed me that (as we know now) the repeated consumption of the fruits would not add one year to one's life. Once it had been taken, organic deterioration, the wear and tear of years, the effect of time upon the human system was checked, slowed down, but life could not be extended beyond a certain definite period. And no one, so he assured me (and so we today know) could foresee what that span of life might be, any more than could be done in those days when man lived but seventy to ninety years of the old calendar. One individual might live to see two, even three, centuries pass over his head and yet remain strong, active, in full possession of his faculties, while another might die a natural death of old age at a century and a half. But once again I am digressing, am reiterating what everyone today knows and which is of no slightest interest.

I was—let me see—speaking of the incredulity of others when, having myself partaken of the fruit and having gathered more to carry to those in Rincon, I at last bade farewell to the Inca for a time, and returned to my friends.

All listened eagerly and intently to my account of the valley, the people and the Inca. All were enthusiastic over the idea of moving to the place without delay, but all laughed, scoffed and poked fun at me when I told them of the Tree of Life and the Inca's tale. That was too much to swallow, and though a few—more out of curiosity than anything else—munched and ate the fruit I had brought, no one for a moment had the least faith in their alleged properties. I say no one, but I must qualify that statement. Isobel believed, Frank believed and Padre Antonio believed—or at least he did not refuse to believe. He was the village priest, an aged man—how he would chuckle and how his merry eyes would twinkle could he but hear me refer to him as "aged" when he was then barely ninety sun-years old! And what a dear lovable soul he was! Jolly, good-natured Padre Antonio, with his honest, rugged, ruddy face, his merry black eyes and his ever-smiling mouth. He was respected, beloved by all regardless of faith or creed. A wonderfully kind, sympathetic and broad-minded man. How well I recall his words when, after years of patient teaching, preaching and praying, the Indians he had labored so diligently to convert to Christianity cast aside all he had fought to establish and, over night, resumed the faith of their fathers.

"Perhaps," he had said, and there was no trace of bitterness nor of disappointment in his tones. "Per-

haps, after all, it makes no difference in the sight of our Heavenly Father whether men worship one way or another. We all look to God in our hour of need and if these people see Him in the sun while we see Him on the Cross, who can say which is the better or if the prayers said by those who kneel before the Cross are more welcome to Him than those uttered by those who kneel before the sun?"

But I must be getting old myself, for I seem unable to keep my mind upon my tale but continue to ramble off into personal reminiscences.

Padre Antonio, as I say, was what we then considered an aged man, and when I told him of the Inca and what he had related to me and of the strange miraculous fruit, the priest neither laughed, scoffed, nor shook his white head in doubt.

"My son," he said, "for nearly three score years and ten have I wandered over this land, and in my wanderings among the Indians many strange and most incredible things have I seen. In my younger days many of these I attributed to Satan, and I prayed that he might be exorcised. But as I grew older and wiser I decided that the evil had naught to do with the matter. Rather, I concluded, there were many things of which we civilized and Christian men were ignorant; many of Nature's laws of which we knew nothing; many powers of the human mind which we could not grasp, but with which these Indians were familiar.

"Many times have they told unto me of events happening many miles distant and of which by no known means could they have had word, but which, always I learned later, were so. Many times have they told me of matters which would transpire in the future, and ever it was as they had said. And many times have I seen them perform what—did I believe in such things—I would have deemed sorcery, magic and witchcraft. And do we not know that from them we white men have learned of the quinine that has saved countless thousands of lives? Was it not from these Indians that our people had the cocaine that has proved such a blessing and a curse to the world? Did they not give to us the tobacco, the potato, the maize, the sarsaparilla, the cacao, the ipecachuana, the bean, the cotton—a thousand things that have made the world better, healthier—that have in their way prolonged men's lives?

"And is the fruit of this Tree of Life really any more marvelous than the bark of the chincona tree that can destroy the germs of the malaria? Is it any more incredible than that the fruit of one tree may prolong the span of life while the juice of another can render human flesh and nerves insensible to pain? No, no, my son! I have no doubts, no disbelief in the Inca's words.

"AND as I am near the end of the accepted span of human life, and can hope, as it is now, to live but a few short years more, I am a most excellent subject for experiment—for a test." Padre Antonio's eyes twinkled and he chuckled as he reached for one of the fruits and munched it. "Now," he continued, "you have but a dozen years or so to wait in order to prove to the doubting Thomases whether or not the Tree of Life is all the Inca claims for it.

"If I grow no older, no more feeble, no more senile than I am today, and if I am still hale and hearty and have not broken my neck or succumbed to some malady in a dozen or perhaps fifteen years, you will find everyone rushing to devour these excellent fruits of the mysterious palm. But, my son, if the tree bears but once in a century, I fear there will be few of those living who will be able to avail themselves of its blessings! You—your daughter, her husband and their child; I—and perhaps another half dozen—will be all who will survive of this present community. And you will be robbed of the pleasure of saying 'I told you so!' So, my son, if I were you, I would use every effort to propagate the trees, to so cultivate them that—even if each bears but once in a century—always there will be some in fruit. And in order that those who doubt may not be forced to wait another hundred years for their turn, why not preserve what fruits are upon the trees today?"

Of course, as all know, good, jolly, old Padre Antonio continued to live on, apparently not a day older, until our year of 92 or fully twice as long as he had ever expected it to be possible to live. But long before he had thus proved conclusively the truth of the Inca's tale, everyone had been convinced of the properties of the fruit and every member of the community had partaken of them—thanks to Padre Antonio's foresight in suggesting that a supply of the fruits should be preserved, for—incredible as it may seem today, when the trees are everywhere—there was apparently but one of the trees in Peru, and hence in the entire world at that time!

Months were required to move the men, women and children from Rincon to the Inca's valley. It was a long difficult journey, for, in addition to the people, we transported every article that might be of use to us—which meant practically everything in the town. We even took the radio telegraph station, though more than six months elapsed before that had been carried piecemeal to Chincana and was again in operation—six months in which we were as completely cut off from all other human beings as though upon another planet.

Had it not been for the aid of the Inca and his people, I fear the undertaking never could have been accomplished. But once the Inca felt that the ancient prophecy was being fulfilled and that it was decreed by the gods that we should share his valley, he did everything in his power to facilitate matters. His men cut paths through the dense jungles; they constructed suspension bridges over ravines and torrents; they carried loads, and they helped in a thousand ways.

ONCE we were established, our lot was far better than in Rincon. Though all about was jungle and forest, the valley was kept free of the rank vegetation and was well tilled, and soon it was dotted with neat, prosperous farms and their contented happy owners. Also, we added to our numbers, for we found a number of small isolated groups of people scattered over the country, and at Huarichiri were nearly as many people as in our own community. All these joined us so that our valley now contained over two thousand inhabitants including the Inca's people. Also, many children had been born, and there had been many marriages, for all realized that we must multiply and increase, and that single men and women had no places in this struggling little world of Chincana. And it was most gratifying to see how well the races joined in every way with all old, ill-founded ideas and racial prejudices cast aside, and how the people of the Inca and our own intermarried, until we were like one great family.

One difficulty that I—as well as others—had feared, had been settled. Always religion has caused quarrels, difficulties, even open ruptures in many otherwise prosperous colonies, and I feared that we might be beset with such troubles. So with Padre Antonio and the Inca and a few others I discussed this matter at length. All agreed with me that if we were to avoid friction there could be no established nor recognized creed, but that every person must be free to worship and believe as he or she thought fit, and though good Padre Antonio was a frocked priest of the Catholic Church, yet gladly and willingly he offered to cast aside all dogmas, questions and tenets of his church, and to teach and

preach a simple form of the Christian faith, that would serve equally well for those of every sect. And of his own accord he declared that to endeavor to win converts would be but to raise dissent and perchance ill feelings. So there, in the quiet peaceful valley, the temple of the sun-god and the temple of the Christian god stood side by side and men worshiped in either as they saw fit or worshiped not at all. Yet in the end, the two faiths gradually drew closer and in time became one and developed into that simple, sublime and wonderful religion that is ours today.

It was after we had become firmly established in the valley and had become organized and settled with our own little government, of which the Inca unanimously had been chosen the ruler, that we made our first trip to the lowlands. Not since those first overwhelming waves had wrought such disaster and death had any one left the mountain heights. Yet over us had gradually come a curiosity, a desire to learn what had occurred, and I volunteered to lead an expedition to the stricken areas. It was a fearful journey through all but impassable jungles and forests, and when at last we came in sight of what had once been the coastal lands, we found it a vast, fetid miasmic swamp, a terrible place, swarming with noxious insects, with loathsome serpents and reptiles, with great repellent crabs, extending to the verge of the stinking, slimy mud-flats that stretched for miles towards the horizon at low tide. And everywhere hung that sticky, yellowish blanket of dense fog that lay like a pall over all the earth and sea. Never had I seen such a tangle, such a maze, such a terrible waste of riotous vegetation. It seemed incredible that such a jungle of immense trees, vines, thorn bushes and a multitude of shrubs, ferns, *lianas* (wild vines), weeds, brambles and what not could have grown up during such a short space of time. Many, if not all, were new to me. Never in all my jungle travels had I seen such weird, gigantic aberrant forms, and I could think of nothing but the world as it must have appeared in past geological ages, in the carboniferous period or before. Now we know that my mental comparison was nothing short of the actual facts, and that our planet, or such portions of it as remained above water, had, through the increased temperature and humidity, slipped back, as one might say for millions of years and that we survivors of humanity were living amid the surroundings, were experiencing the same conditions that had existed when the world was young and in its making.

So overgrown was everything, that scarcely a vestige of the once great cities and populous towns remained. Little had been left standing after those terrific surging tidal-waves and what little had been spared was now so covered with the rank verdure that the ruins appeared but jungle-covered mounds. We could scarcely believe that we were traversing what had once been barren deserts, fertile valleys and smiling plains where lofty buildings had towered and teeming thousands had lived and toiled, and so greatly had the surface of the land been altered by the erosion of the tidal waves the incessant drizzling rain, the débris washed down from the hills, the terrible earthquakes and the vegetation, that it was absolutely impossible to identify once familiar landmarks. Our journey, however, was not without results. Among some barren sand-dunes beyond reach of the sea and where the shifting sand sustained but little vegetation, we came upon vast quantities of wreckage left by the great tidal waves that had swept over the land. And among this—though we could not salve them at the time—were many objects that I knew would be of great value to us. And in one spot, wedged between two hills, we came upon a wrecked and stranded ship.

Though she had been badly buffeted and was red with rust, yet to my eyes she did not appear irretrievably damaged. I had half-formed visions of seeing her some day once more afloat and of thus having means of voyaging over seas, of visiting other lands, determining if other colonies of human beings still survived, and if so of succoring them or joining forces. But I realized that, even were it an engineering possibility, it would be a herculean task, that it would take years to accomplish. It was a dream of the future, yet for the present the hulk proved of great value to us. Her hold was still filled with cargo and while much had rotted or had long since been transformed to rusty metal, slimy sludge and unrecognizable detritus, much was still in serviceable condition, much could be salvaged. Among other things, there were tons of coal. And we greatly needed coal if we were to advance, were to have iron and steel tools, implements and machines, for while we had enough for present needs, they would wear out eventually and without coal and a supply of iron we could not hope to replace them. And with coal we would be able to smelt copper and other metals as well. Indeed, the discovery of this store led me to delay my return to the valley and to spend several weeks searching for the stores of coal that, I felt sure, must have been washed up by the sea when it had swept away the wharves, the docks, the naval stores and the coal piles of Callao. Though at the time we were not successful, yet eventually we secured enough to answer all our needs until we had our own mines. But in this search we came upon great numbers of barrels of oil, casks of wine, puncheons of sugar and the wreckage of machinery, of railway carriages and of other valuable and useful materials.

FINALLY, quite satisfied with what we had accomplished, we returned in safety to the valley, and fair and beautiful indeed did it appear after those weeks in the dismal, fog-shrouded, pestilential swampy jungles of the lowlands.

Yet matters had not gone well in the valley, and while we had been absent, our people had been struggling frantically against the dangers that had beset them and had attacked them both from the sky and from the earth.

Out of the heavens had come great swarms of gigantic locusts devouring every green thing that lay in their path, and leaving in their wake a swathe of bare, seared earth and leafless stalks as though a fire had passed across the land. Madly our people had battled with them, fighting to save their crops that meant their very lives, and that had cost years of labor, fighting the winged foe with fire and smoke, until at last, with half the fields laid waste, the remnants of the insect hosts had gone on their way. And constantly, daily, hourly in fact, there was the ceaseless, never-ending battle with the jungle growths that seemed determined to overwhelm the valley and transform it into a wilderness. Yet were we far better off than others who, as we learned by our radio-telegraph, were striving to live and to regain something of their old time status and to increase and to maintain civilization in the midst of the wilderness. Some had been attacked by vast hordes of rats, others had been overrun with armies of giant ants, others had been visited by millions of soldier-crabs, and others still by swarms of noxious insects or other pests and vermin.

Yet all were still holding their own—tiny groups of heroic men and women battling a relentless, pitiless, destructive Nature that seemed determined to leave no civilized human being upon an earth that, itself, had gone back to chaos. Often in our blackest, most hopeless hours, I wondered if it were worth while, if it would

not be easier, better to abandon all our efforts to remain civilized beings, and never regain our former status and advancement; if it would not be as well for all, if we, too, threw off the restraint, the culture, the knowledge and the humanity acquired through long centuries of slow progress of groping and of evolution, and following Nature's example, returned to the status of mankind in those dim and distant ages when savage beasts and savage Nature were no more savage than the savage men.

Yet these were but passing thoughts shared with me by others, and never for a moment did we falter; never did we think seriously of admitting defeat. Despite every obstacle, every setback, every new problem that arose to confront us, and despite all odds, we steadily increased; we improved, and we retained all that had been our heritage when the calamity had come upon the world. Nay, more, for combined with what we knew and taught our youth—for we now had schools and other institutions—there was much that was known to the Inca and his people of which we of the white race had never dreamed. It was the Inca, too, who first gave to us our new calendar, basing it upon the ancient system of his forefathers and it was he who suggested and organized the form of government which we still maintain with its tribunal of Wise Men, its Court of Rights, its Inca's Council and its simple yet just laws. And while for a space we had troubles at times with those who would do wrong and injure others and would not obey the rules and laws, yet by forcing these to labor at clearing the jungle and making new farms away from others, in time all became law-abiding and orderly. But these are matters, all of which are well known and are recorded in our histories, while many other matters that I may better relate have been forgotten and are not recorded, or, if they are, are barely mentioned.

CHAPTER VII

The Misguided Ones

NO one knows whence or how the Misguided Ones came. Perchance they had always lurked in the unknown jungles to the east and were merely driven into the mountains by the floods. Perhaps they were but the degenerate, perverted members of some race that, before the moon went mad, had been well known and harmless, even cultured. Or—though it seems incredible—perchance, as some claimed, they were the offspring of conditions, brought into existence by the heat, the humidity, the pestilential swamps and jungles. This seems impossible, yet who can say? Before it took place the moon's wild antics would have been deemed impossible. Before the entire face of the earth was altered in a night that would have been scoffed at as impossible. And to my mind it was no more impossible for such beings as the Misguided Ones to have been spawned by Nature in her mad chaotic debauch of those days than that she should have produced those weirdly terrible forests, those nightmarish morasses, those gigantic insects and those inconceivably horrible monsters that sprang into existence in such an incredibly short space of time.

But it made no great difference to us whence or how the Misguided Ones came. They appeared to us suddenly, unheralded, as the hordes of locusts had appeared, and seemingly as numerous and far more terrible.

One moment we were dwelling in our peaceful valley, tilling our fields, tending our flocks, teaching our children, carrying on our accustomed tasks and duties. The next moment wild, demoniacal yells arose, and a horde of horribly evil, brown men, hairy, misshapen, bestial beyond description, naked as apes, were upon us. Unarmed—for we had no reason to expect attacks—unprepared, scattered over the great valley, our people were at the mercy of the little ape-like creatures. Without warning they fell upon those nearest to the jungles. With fiendish ferocity they threw themselves upon men laboring in the fields, striking with their clubs, discharging their rude wooden-tipped arrows from their short powerful bows, screaming like madmen, gnashing their teeth—inhuman, horrible, yet undeniably, human beings.

Yet their very savagery, their demoniacal fury, defeated their ends. Had they come silently, stealthily, few if any of our people would have escaped. But as it was, many were warned. Women and children who were able to do so, fled to their houses, where, behind stone walls and bolted doors, they were safe, while the men rallied, quickly gathered together, and, with whatever weapon or bludgeon they could find, rushed to the attack. Still many more were borne down and destroyed in the first rush. I saw one man, ploughing his field, surrounded by a horde of the devilish beings. In an instant he was hidden from sight by brown, writhing, struggling bodies. Once, twice, thrice, I saw that living mass thrown aside. With his bare hands he seized the screeching, snarling things, shook them as a cat will shake a rat, crashed their heads together, and using the dead bodies like flails, mowed down those who tore, bit and struck at him from every side.

Yet no one could triumph over scores. Clubbed, pierced by countless darts, he fell at last, fighting to the end, and ere breath had left his body he was torn to shreds, torn limb from limb as the unspeakable cannibals gorged themselves like ravening beasts upon his bleeding flesh. And we who saw the tragedy, the horror of this and of a dozen similar deaths, were powerless to aid. They were but incidents in the furious battle now raging everywhere, and we were fighting like madmen against the main body of our implacable foes in our endeavor to safeguard the women and children in our midst, as we retreated slowly, step by step, toward the city where, within massive stone walls, we would be safe.

Safe! Safe from the clubs, the missiles of the demons in human form, yes. But trapped, surrounded by the terrible beings who seemed not to heed wounds nor death, as long as they could destroy.

We had few fire-arms—half a dozen of the short-barrelled hand weapons that were called revolvers and pistols and in the old days were used for self defense, perhaps half a dozen of the guns used for hunting, and about twenty of the more powerful weapons that had been in the hands of the soldiers stationed at Rincon, for it must be recalled that, before the moon had run wild, civilized men actually fought with their fellows, and every government had maintained forces of men equipped with weapons for destroying those who broke the laws or who sought to overthrow the existing order of things—as well as for many causes which it is not necessary to mention.

But, having no use for these weapons in this Valley of Chincana, where all was peaceful and we had (so we thought) no enemies and no need of protecting ourselves from harm, these weapons—save for a few of the guns used for hunting and killing wild beasts and birds to provide food—had been laid away and could only be secured by searching about for them and for the ammunition necessary, which would require time and could not be accomplished without first beating off the crowds of bloodthirsty savages who swarmed on every side. But by merest chance some of the weapons of the soldiers had been stored in the building in Achupa, wherein the governing officials held their meetings, and where were kept all common property—tools, implements, supplies

and other articles—that had been brought from Rincon and were not in use. Yet a number of the enemy were between us and the building, so that even knowing the weapons to be there we could not secure them.

IT was then that the Inca's men came forward and and volunteered to throw themselves upon the demon-like creatures in an heroic attempt to clear the way. Instantly a number of our men joined them, and arming themselves with knives, axes, bars of steel, pitchforks and whatever they could secure, they rushed upon the savages. Madly the battle raged. Hacking, cutting, stabbing, fighting like madmen, the warriors of the Inca and our fellows mowed down the naked brown men by scores.

Their keen steel weapons bit through flesh and bone. The dead and wounded lay in heaps, and knee-deep in bleeding flesh and writhing bodies the little group forced their way slowly forward, while ever in the lead the Inca shouted the war cry of his people and whirled his great, bronze battleaxe until it flashed like a ring of flame. Time and again I saw a savage head leap from shoulders as the mighty blade reached its victim. I saw brown men's bodies cleft in twain from neck to waist as the gleaming axe swept down, until amid a rain of arrows and a shower of hurled clubs and missiles, the Inca reached the building unscathed with the survivors of his followers about him. Of the fifty men who had sallied forth, a bare twenty reached their goal, but for every man who had fallen, a dozen of the Misguided Ones had been destroyed.

The next moment the little group vanished within the building, and instantly, from every side, hundreds of the maddened, screaming, horrible little savage creatures came rushing to the scene of battle. With fiendish glee they threw themselves upon the dead bodies, upon the still living wounded men, beating them into shapeless pulp, mutilating them, until we sickened with the nauseating horror of it.

Slowly the minutes passed as the diabolical orgy of the savages continued. Then suddenly fire flashed from windows, the crash of a volley drowned the shrill cries of the horde of savages, their triumphant shouts turned to terrified screams, and as dozens fell dead and wounded by the gunfire, the others, mystified, paralyzed with superstitious fear, stood motionless or threw themselves upon their faces amid the blood and battered bodies. Again and again the musketry roared and flashed, mowing down the fear-mad beings, until with despairing cries the few survivors turned and fled from the city.

We in the city were safe, but there were thousands yet in the outlying sections, in the isolated farms, the tiny villages of the valley, and the place still teemed with the naked savages. Now that we possessed firearms we felt we might hope to drive them off, and, equipped with guns and pistols, a force of sixty men went to the attack. But even with these weapons, despite the slaughter they wrought and the deadly fear they inspired in the Misguided Ones, the force was compelled to abandon their heroic efforts and returned with many of their number wounded. To be sure they had rescued a number of our people; they had inflicted heavy losses on the enemy, but they reported that as fast as the fearless, devilish beings were destroyed others appeared, as if by magic, to take their places.

It seemed hopeless to think of saving those of our people who were thus cut off and surrounded. And then, at our darkest moment, came sudden light, the light of inspiration from one of our men. Among other things that we had brought from Rincon was the airplane which, as I have already described, had been the means of saving the lives of the radio operators at San Pablos. It was of no value to us, for we had very little fuel and there were no spots in that jungle-covered country where the machine might land, yet the young man who had been in charge of the machine had kept it carefully protected and in perfect condition through the months and years that we had been in the valley.

And now, suddenly, a strange, throbbing sound came to our ears, and the next moment over our heads roared the great bird-like machine. For an instant all gazed in wonder at the apparition. Many of us had forgotten the existence of the machine, and no one could imagine why, after all this time, it had come suddenly to life, was being suddenly brought into use. Did the two men up there believe they could summon aid? Did they have some wild idea of rescuing some of our people by means of their machine? Or were they deserting us, taking this means of getting away from the valley and the savages? The next moment our mental questions were answered. With the speed of an arrow the great machine dove, plunged towards the earth. Sharp involuntary cries of pity and of horror arose from the watching throng. The machine was falling, was about to crash to earth, to destroy the lives of two more of our all too few people. Then, while with bated breath we listened for the rending sound of its destruction, it turned, and with a roar of thunder from its motors, it swooped straight at the horde of savages who, transfixed, had been gazing at the giant bird. Screams of mortal terror, of maniacal fear mingled with the roar of the machine. Madly, frantically the terrible creatures who were fearless of death in battle, who had pitted their crude arrows and clubs against keen-edged steel, who had not even been routed by firearms, turned and fled in every direction as this awesome, winged demon from the skies swept upon them. Crowding, milling, madly fighting one another, they strove to escape. Many were struck down by their fear-maddened fellows, and straight into that struggling, seething mob the machine tore with irresistible force. A red haze half hid its whirring propellers, wings and body seemed suddenly painted red, and with a flip of its great metal tail, that killed a dozen savages at a single blow, the airplane rose swiftly upward from the ghastly shambles it had wrought.

Why it was not wrecked, disabled in that mad charge into the mob of savages is beyond my comprehension. When the machine came to rest and the two young heroes stepped forth, they stated calmly that they had never expected to survive, that they had been confident the machine would be wrecked when it plunged into the horde of beings and that they had counted upon the explosion of its fuel and the fire that would follow to complete the destruction and the stampede of the savages.

BUT nothing more was needed. As though the earth had opened and swallowed them up, all the living savages had vanished. Only the dead and wounded remained. Then, as we hurried to reassure all of our people that the danger was over and to take account of our losses, we made a strange discovery that, we decided, accounted for the attack and the seemingly insane ferocity of the Misguided Ones. Not a single woman had been killed or injured, intentionally. Many had been overwhelmed and seized by the terrible creatures, but in every case their captors had used care that they were not harmed, had made every effort to safeguard them, and, thank God, only three had been carried away. The others had all been dropped in that final terrified flight of the creatures. But it was evident to us all that the fiends had fallen upon us to kidnap our women. No doubt they had been driven from their native haunts in some dismal unknown jungles as the

overwhelming waters rushed upon them, and their women, burdened with children and weaker and slower than the men, had all, or nearly all, perished. Only the men were left, and having found our valley and seen that women were there, they had come swarming in determined to destroy the men and take the women for themselves. We all shuddered and gave fervent thanks to the Almighty, realizing how nearly they had succeeded. Had it not been for the bravery of our men and those of the Inca, had it not been for our long-disused firearms, and had it not been for the suicidal, heroic inspiration of the two aviators, our valley would have been laid waste, our men butchered and our women carried off to a far worse fate than death.

And though we felt confident that the creatures would not at once return, that for the time being we were safe from their attacks, yet we fully realized that never, as long as any of the horde remained alive, could we feel really secure and that we must be prepared for battle at any time and must be constantly on guard, continually on the alert, to protect ourselves, our women and our homes.

But first there were most repulsively horrible matters to be attended to. There were hundreds of dead, mutilated, mangled corpses to be destroyed or buried, and already flocks of great broad-winged vultures were circling overhead, winged ghouls, seeking a chance to gorge themselves upon the bodies of the slain.

So for hours we labored, digging deep trenches in which to bury the enemy dead, digging graves for those of our own people who had fallen, until at last there was no ghastly reminder of the carnage that had been wrought.

Not until this repulsive duty had been accomplished, did we cease our labors. Then, having gathered the people into the city for safety and with armed sentinels on guard to give the alarm in case the Misguided Ones should reappear, we sought well deserved rest. Little did anyone dream of that even more terrible peril so close at hand; that silent, awful terror that stalked through the night, and whose mysterious ghostly presence caused the stoutest heart to tremble, the bravest face to blanch and the most matter-of-fact minds to be filled with soul-racking, superstitious terror.

CHAPTER VIII

A New and More Terrible Menace

NO alarm was given by the sentries, nothing disturbed us during the night. But early the next morning, men who had gone forth to garner their crops and till the fields came racing back, wild-eyed, white with terror and shouting incoherently. Our first thoughts were that the Misguided Ones had returned, that the men had come upon them in the valley. But when the fellows had calmed themselves sufficiently to speak intelligibly, the tale they told seemed too incredible to be true, too ghastly to believe.

Passing near some of the trenches wherein we had buried the bodies of our slain enemies, the men had been horrified to see the earth torn up and thrown aside, while not a trace of the corpses could be seen! Then, as they had stood, filled with vague wondering dread, they had seen in the freshly turned earth the deep imprints of gigantic hands and feet; tracks of flat-soled feet more than a yard in length and of hands half a yard across the palms, with fingers eighteen inches in length and with foot-long thumbs. For a space they had stood there—gazing speechless, with unbelieving eyes—at these mute evidences of the presence of gigantic beings in the vicinity. Then, suddenly realizing that it must have been these ogres who had disinterred and made away with the bodies, filled with such terror as they had never before known, the men had dashed headlong from the spot, expecting each moment to hear the thunder of pursuing footsteps, to see some unspeakably terrible, gigantic beings racing after them.

So vivid was their tale, so manifestly had the men been driven almost mad with fear of what they had seen, that chills raced up and down our spines and we cast furtive terrified glances about as we listened. Yet there was no sign of enemies, no indications of monstrous forms lurking near. All was peaceful, quiet in the valley. What could it mean? What thing, what unimaginable ogre could have wandered about during the night, could have dug up those mutilated, shattered bodies and carried them away? What terrible, mysterious, inconceivable menace lurked in the dense jungles surrounding our valley?

I do not think there was one of our number who did not feel that there was something uncanny, something supernatural about the affair, yet no one would have admitted it, no one would have confessed to being filled with that worst, most terrible of fear, the fear of some nameless, spectral unknown thing.

It was Padre Antonio who was first to speak and break that ominous, awesome silence. "There is nothing on earth or in the sea that is not of Nature," he said. "Whatever being left those footprints is a being of flesh and blood. Often," he smiled, "our imaginations are our worst enemies. Shall we, who have faced and vanquished those hordes of savage men, be dismayed at the mere thought of what is perhaps less dangerous, less savage? Whatever it may be, let us go forth and face it as we have faced all dangers that have beset us. Let us learn what it is and then plan to destroy it. Because it is huge, it may be even the less terrible. Great bodies move but slowly and often the brain of a giant is a tiny thing. Come, my children, let us arm ourselves and set forth at once."

Padre Antonio's sensible words galvanized us into life and realization of our childish superstitious fears. Leaving an armed guard in the city, we set out, with ready weapons, towards the spot where the giant's footprints had been seen. The men had not exaggerated. For nearly fifty feet the earth had been excavated and the dead bodies removed and everywhere were dozens, scores of those immense imprints, imprints so gigantic, so vividly real, so human, that the bravest among us fairly quaked with dread of the monstrous thing or things that had been here during the night. I say thing or things, for there were so many imprints, that no one could be sure whether all had been made by one of the giants or if several had been there. Still we fought back our fears and searched about, striving to trace the marks, trying to follow the trail, to learn whence they came and whither they had gone. Soon we discovered, to our vast relief, that there had been but one of the giants. There was but a single line of the huge footprints leading out of the jungles, a single line where the thing had retraced his way to his hidden lair. And there were no imprints of hands. The thing had walked erect, like any ordinary man! Even Padre Antonio's face paled as we realized this. It was bad enough, terrifying enough, to imagine some giant beast, some inconceivable monster having been there, but a thousand times more terrifying to think that the thing was a monster in human form—a veritable ogre, some being beyond the power of the mind to visualize. And then we made a still more horrible discovery. We found the spot where the giant had squatted—the marks made by his hams were deeply pressed into the earth—and we felt sick and nauseated as we came upon the cleanly picked bones, the half-devoured bodies, that the ghoulish cannibalistic monster had dragged from their graves.

All our forced courage, all our mask of bravery fled at this discovery. Nothing on earth would have induced us to have investigated further, to have approached a foot nearer to the ominous, dark fringe of forest beyond the confines of the valley and its open fields. We drew back, our eyes fixed upon the jungle, momentarily expecting to see some indescribable, terrible thing come rushing forth, scarcely daring to turn our backs and flee. Suddenly, shattering the silence, from the depths of the jungle, came a hair-raising, piercing scream, the scream of a man in mortal terror. Then came a low, snorting, bellowing roar, a crashing of trees, and once again that fearful shriek followed by a chorus of wild frightened cries, a rattling, moaning wail—then silence!

For an instant we stood there, white-faced, trembling, too paralyzed with abject terror to move. I saw Padre Antonio cross himself and his lips moved in prayer. I saw strong men shaking as with palsy, ready to faint. I saw the Inca stagger back as if struck in the face, and so numb was I with mortal, nameless terror that, had I been attacked, I could not have lifted my weapon to my shoulder. Thus for a brief instant we stood, powerless to move, ears strained, expectant, staring with fear-filled eyes fixed on the forest wall whence those blood curdling sounds had issued. And then—the jungle parted and framed in the dark background of the trees, the thing appeared! No words, no description can convey the horror of it. Until my dying day it will haunt me in my dreams. A monstrous, gigantic, horrible form towering sixty feet above the earth; a vast, paunchy, flabby-bellied thing with skin the livid blue of a putrid corpse; with massive legs the size of tree trunks; with a short, stout neck supporting a misshapen head that might have been that of a demon; with tiny, indescribably diabolical red eyes; with great, loosely-slathering protruding jaws, and with short, crooked arms ending in immense hands, in one of which was grasped the still writhing, horribly mutilated body of a brown-skinned savage!

Yet ghastly, inexpressibly terrible and repulsive as was the apparition, its appearance was a relief to our overstrained nerves. It was a thing of flesh and blood, a thing mortal, alive, and that greater terror, that terror of the supernatural that had filled our minds, though none would admit it, vanished instantly in our knowledge that the thing was real. One instant we had stood shaking, helpless, paralyzed with horror of the unknown. The next moment we were filled with loathing, with deadly hatred of the semi-human monster, and while fear, the fear of imminent peril, was still ours, it was normal, natural; the fear of a powerful, terrible enemy and nothing more.

WHO fired the first shot I cannot say. The report roared out, and as if it had been a prearranged signal, guns flashed on every side. Utterly unconscious of my actions, I found myself shooting, mad with the lust to kill, at the gigantic thing in the shadow of the forest growth. I saw the monster writhe, I heard the dull thud of bullets against its body, I saw dark mucous-like blood spurt from a dozen bullet holes. I saw the mangled body of the savage drop from the creature's grasp. And then, as with a bellowing roar it sprang forward in a prodigious leap, I turned and ran as I had never run before towards the distant city. About me the others dashed, panting, until, almost at the city, we glanced back and saw no sign of the pursuing monster.

No one even knew if the thing had chased us. No one had stopped to look back to learn whether the horrible creature had fallen dead or wounded or had followed for a space and had then turned back into the jungles. All we knew was, that it was not in sight, alive or dead, and no one had enough courage to go back and ascertain the truth.

The fear that had been inspired by the brown savages was nothing compared to the dread of this new menace. They had been men—fellow human beings even if scarcely human; beings whose ways we could more or less understand, whose forms—dwarfed, apish as they were, were still familiar in appearance, who seemed natural, neither uncanny nor weird. And their actions had been those of men. They had fought with clubs, with bows and arrows, and despite the fact that they had been bestially cannibalistic and repugnant, yet there was nothing that savored of the supernatural about them. But this thing—this monstrous gigantic thing—was unlike any creature we had ever known or imagined. And in the face of such an unknown quantity—even though we now knew it was flesh and blood and merely a titanic beast—in the face of such overwhelming power and size, we felt utterly at a loss, utterly helpless, and I could imagine how the first of man's ancestors must have felt when, cowering in a narrow cave, without weapons other than stones, they shook and trembled at the approach of sabre-toothed tigers, giant cave-bears and lumbering dinosaurs. At the mental picture my thoughts conjured up, sudden light dawned upon me. Dinosaurs! That was it—this monster, this horrible thing that haunted the jungle, was a dinosaur! I felt sure of it, convinced that I was right, and at my announcement all agreed it must be so, and a tremendous burden of fear seemed lifted from our minds. However, the fact that we had accepted my identification of the monster did not lessen our peril or our very imminent danger. The dinosaur, if dinosaur it was, was a ferocious, man-eating creature. We had ample proof of that. He had disinterred and devoured a number of the dead savages, and within our hearing—yes, within our sight—he had killed and had been on the point of eating one of the living Misguided Ones. It was not until we spoke of this, as we discussed what was to be done, that we realized that the monster had actually been of service to us—that he had been more useful than harmful, for not only had he warned us that the savages still lurked close at hand, but—so all agreed—with him roaming about, there was little fear of the brown men remaining in the vicinity. Still, we could neither hope nor expect that the great beast had any preference for savages, and if our enemies had fled from the neighborhood it only increased our own danger. The monster would be hungry; he had seen us; he would, we felt, follow our tracks and would eventually attempt to attack and capture us.

To be sure there were still hundreds of bodies buried in the valley and these might satiate his appetite for some time. But for all we knew, he might prefer freshly killed meat and we were all convinced that it was but a question of time—of days, perhaps hours—before we would be called upon to defend ourselves from this new and terrible menace. And where there was one of the things there was every reason to expect there would be others. It was inconceivable that there should be but a single individual. Whether he was a stray, a wanderer from the depths of distant submerged jungles, driven like the savages into the highlands, or whether he had been evolved, bred of the humid climate, the rank foetid swamps since the mad moon had knocked everything topsy-turvy, it was certain there must be others of his kind. We might trap or kill one, but what chance would we have against dozens, scores, hundreds—great herds of the giant beasts? Yet something must be done. Some plan must be formed and carried out. We could not remain there penned up in the city, afraid to venture forth, quaking with dread.

Our fields must be tilled, our crops garnered. Our daily tasks must be continued without interruption. Bad as was this monster, he was not one-half, one thousandth as terrible, as the greater, more ruthless monster—famine. We were an agricultural community. We depended wholly for our livelihood upon our fields and crops, and to feed more than two thousand mouths requires a vast amount of food in steady production.

But as long as the monster was known to be near, no one would dare venture from the city. Only after hours of discussion and of argument could a small force of the most courageous be induced to investigate, to determine if our shots had killed or crippled the monster. But they learned nothing.

They found no traces of him, they heard no sounds, when, summoning up all their courage, they had penetrated a short distance into the jungle. But as no vultures circled over the forest, we felt morally certain that the great beast had *not* died even though he might have been wounded. And when the next day dawned and we found the burial-trenches again torn open and more bodies devoured, we knew that either he or one of his fellows was still near, that he was alive and well and still possessed a most voracious appetite. That day, through sheer necessity, men were compelled to go out into the valley and gather crops. These men were not attacked; the monster or monsters did not appear, and a slight measure of our courage was recovered. Still, the thing or things might, normally, sleep during the day and go foraging at night. Perhaps the savages had aroused that fellow and he had merely killed the man in blind rage instead of deliberately hunting him down. If so, we would be reasonably safe during the daytime and, by lying in wait, we might destroy the thing at night without exposing ourselves to undue danger. So that day the people worked in the fields—ever with ready weapons close at hand—and plans were made to attempt to end the reign of terror, if the monster again returned to disinter and devour the dead.

WE did not intend to depend upon the bullets from our guns. We felt that a regiment would be needed, thousands of bullets required, to cause mortal injuries to that mountain of cold-blooded, tenacious life. But we had, among our unused supplies, a large quantity of explosives—a chemical called dynamite and several cans of blasting powder used for blowing up stumps and rocks, of which we had used very little. With this we planned to lay a mine in the earth above the buried savages, close to the spot where the monster had dug up the bodies on the preceding night. Then, lying in wait at a safe distance, we would watch for the creature's appearance and when he was over the hidden explosives, we would fire the mine and blow him to bits. There seemed but one chance of failure. The beast might not renew his ghoulish work in the spot where we placed the mine. But we had to take that chance.

So, for hours we worked, ever with watchful, frightened eyes upon the forest, until at last all was ready and we felt sure that, should the monster appear and move above our concealed explosives, we would be rid of him forever.

It was nerve-racking work, lying there in the silence, awaiting the coming of that horrible gigantic thing. As long as the great golden moon swung athwart the sky, illuminating the valley with subdued, soft light, it was not so bad. But as the satellite sank towards the west and long shadows crept across the land and in the dusk familiar objects assumed weird unusual shapes and the forest rose in a dense black wall against the sky, we became nervous, tense, filled with a thousand fears, starting at every sound, peering wide-eyed, with bated breaths at every shadow. At last, to our straining ears, came the distant swish and crackling of branches. We held our breaths, listening, our hearts beating madly. Nearer and nearer the sounds came. Then a faint, squelchy sound, heavy footfalls, felt rather than heard, and then—so suddenly, so unexpectedly that I could scarcely suppress a scream—against the lighter background, loomed a vast black bulk, a bulk appearing thrice its size in the moonlight; a bulk colossal, animate, moving slowly on all fours, sniffing the air suspiciously, as slowly, cautiously, it approached the spot where our mine lay buried. A moment more and the gigantic beast reached the grave-trench. Rearing itself upon its massive hind legs, it seemed a veritable mountain as it moved its enormous head from side to side, peering about as if suspecting danger or—I trembled in my shoes at the thought and felt sick with dread—scenting human beings that it might devour. For a space it stood thus, as if undecided whether to dig up the bodies of the dead or search for the living. Then it dropped to all fours, moved a few yards forward and commenced digging with its front feet, hurling shovelfuls of earth aside at each stroke. So interested and fascinated had I become, that I forgot the mine.

Suddenly a volcano seemed to spring into eruption beneath the monster. There was a deafening, thundering detonation, a burst of flame. I saw rocks, earth, go hurtling skyward, and the huge monster, the thing that had been impervious to bullets; that had seemed invulnerable, was lifted, hurled aside, rent, shattered. I saw one great fore-foot go sailing off like some huge nightbird. I saw that horrible head severed from the neck and flung in air, and bits of flesh and thick horny hide came raining about me even at the distance I lay hidden from the scene.

No one cared to go very close to that immense mangled and blasted carcass. It was a horrible, a revolting sight, and it smelled to high heaven.

It was enough to know that we had destroyed the monster, that unless there should be more than one, we would be freed from terror of its attacks in the future, and, elated at our success, we returned to the city in high glee.

CHAPTER IX

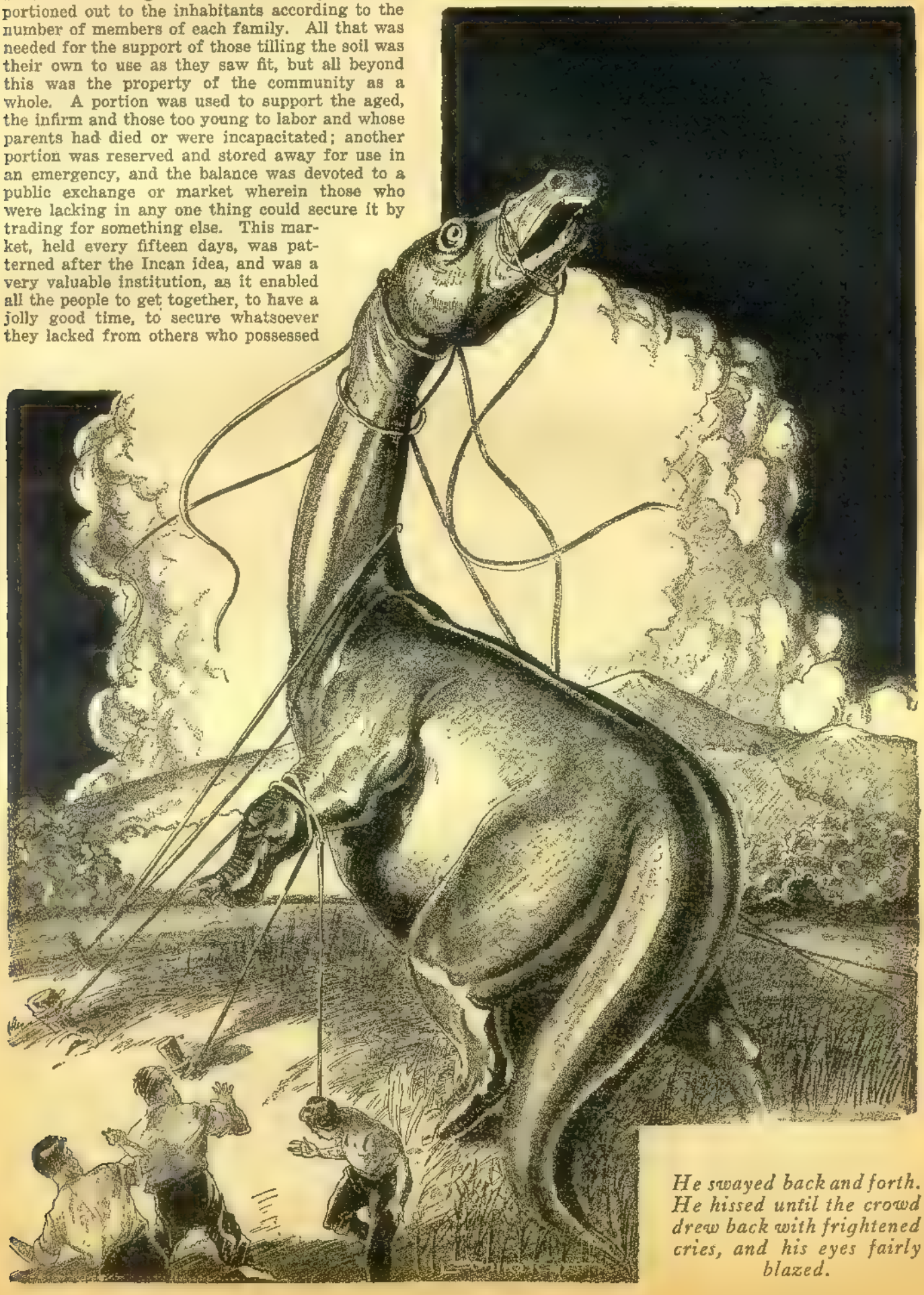
Carnivorous or Herbivorous—Which?

TO have buried that great body and the various masses of flesh torn from it would have been a tremendous and a most disagreeable undertaking. So, as it was not near any of the farms or houses, we left it to the foxes and buzzards who made short work of it. As no other monsters appeared, and no more tracks were found, we felt reasonably sure there were no others in the vicinity. And as the brown savages did not reappear, we felt that they, too, had left us in peace, and so once more we resumed our former life and labors. Still, we had been taught a lesson and we organized a military or rather a police force, to patrol and watch the valley day and night. It was a tiny organization, and half a hundred firearms were most inadequate to protect several thousand people and an immense valley. But it was better than nothing, and as all houses were strengthened and many were transformed into veritable forts, we were not as helpless as before.

It was several months—I am not sure now just how long—after the final destruction of the man-eating monster, that I made a most startling discovery.

Like every other member of the community, I had a farm of my own. I say my own, but I must qualify that statement. No one was allowed to own land or

the products of the soil in his own right. The arable land belonged to the community and was portioned out to the inhabitants according to the number of members of each family. All that was needed for the support of those tilling the soil was their own to use as they saw fit, but all beyond this was the property of the community as a whole. A portion was used to support the aged, the infirm and those too young to labor and whose parents had died or were incapacitated; another portion was reserved and stored away for use in an emergency, and the balance was devoted to a public exchange or market wherein those who were lacking in any one thing could secure it by trading for something else. This market, held every fifteen days, was patterned after the Incan idea, and was a very valuable institution, as it enabled all the people to get together, to have a jolly good time, to secure whatsoever they lacked from others who possessed



He swayed back and forth. He hissed until the crowd drew back with frightened cries, and his eyes fairly blazed.

more than they needed, and—at the close of the fair—to take part in a feast, a dance and a general merry-making, that was given free to all by the government. At these times, too, all suggestions and complaints were heard and adjusted, new rules and laws were promulgated and voted upon, and all official business was attended to.

So when I said that I had my own farm, I meant that I had been allotted a plot of rich land for cultivation. I took great pride in the place, for in addition to cultivating the necessary fruits, vegetables, grains, etc., that I raised, I conducted a sort of agricultural experiment station and nursery. Here, for example, were hundreds of the Trees of Life, for, acting upon Padre Antonio's suggestion, we not only had gathered and preserved all the fruits of the trees that could be found—and had enough to last the entire community for many years—but in addition we had endeavored to propagate and cultivate the trees artificially. If the trees bore but once in a century, it was obvious that it required a century for them to grow to maturity and, as Padre Antonio had so clearly seen, if we planted the seeds every year, we would eventually have trees bearing continuously.

It had required a vast amount of time, of patience and of experimenting, before we met with any success. But in the end I had succeeded and I now had, as I say, several hundred young trees in various stages of growth. To be sure it would be nearly a century before we could feel sure these cultivated trees would bear fruit, but as I had full confidence in the seemingly magical properties of the nuts, and fully expected to be alive and energetic for another century at least, I looked forward to witnessing the success or failure of my industry and, at times, discouraging efforts.

So, when on the morning I referred to, I started on my daily rounds of inspection, my amazement, my anger, and my horror may be imagined when, upon reaching the grove of these marvelous trees, I found them broken, thrown to the ground, uprooted and destroyed. Only a pitiful few remained unharmed. It looked as if a cyclone had swept through them, yet I knew there had been nothing of the sort. Heartsick, filled with rapidly mounting fury at thought of whoever or whatever had caused such irreparable loss, utterly discouraged at seeing my labor of years thus destroyed in a single night, I glanced about, striving to solve the mystery, racking my brain to think who or what could have done it. Then, glancing down at the earth, I uttered a startled cry and stood staring, trembling. Clearly imprinted in the soft, loose soil where a tree had been uprooted were two enormous footprints! Instantly I realized what had occurred. Another of those monstrous horrible beasts was at large! He had gone through my grove of precious palm trees as a man might push through a clump of weeds.

Ordinarily I should have been terrified, should have been filled with dread at thought of another of the monsters in the vicinity. But I was so outraged at the damage he had done, so beside myself with rage, that I thought only of the results of his presence. Moreover, I knew that the other monster, the one we had killed, appeared only at night, yet consciously, this thought did not enter my mind. I was, as I say, thinking only of my beloved trees. Cursing the beast under my breath, I hurried forward, inspecting the damages, counting the trees injured beyond all hopes, and noting those that might be restored and nursed back to health once more. So I scarcely noticed my surroundings, other than my blasted trees, until, glancing through the wide swatch cut through the grove, and groaning at the wholesale destruction, I saw what appeared to be a great, rounded mound of earth just beyond the trees. For a moment I wondered how it had come there and, the better to examine it, I stepped forward. The next instant I uttered a frenzied yell that must have been heard a mile away. The mound heaved, moved, trembled as if shaken by an earthquake, and before my horrified eyes, rose on four feet!

I WAS rooted to the spot with ghastly fear. I had almost stumbled onto another of those terrible man-eating monsters! Yet even in my numbing terror I realized that this gigantic thing was not exactly like the first; it was even more terrible, if anything. From its huge, pot-bellied body, swaying on its massive legs, extended an enormously long, almost snake-like neck ending in a small vicious-looking head that, as I gazed with wide eyes, was moving from side to side, sniffing suspiciously, peering this way and that as if trying to locate my presence. Then, either seeing or scenting me, the head reared up like a serpent about to strike, and with its tiny green eyes gazing fixedly in my direction, the monster turned slowly and gathered its stupendous body into an arch as if to leap upon me. Somehow I found my legs, found motion, and turning, I raced, screaming at the top of my lungs, from the spot. Close at my heels I heard the earth-shaking tramp of that gigantic beast. I could almost feel his foetid breath upon my back. I expected each instant to feel his jaws closing upon me. But I dared not even glance back as I dashed along, leaping over fallen trees, dodging between the trunks, in a mad but hopeless endeavor to escape. Then my toe caught on a root, I tripped, plunged headlong, and in a galaxy of stars dropped into a black void of unconsciousness. I opened my eyes, my brain in a turmoil.

For an instant I thought it all some horrible dream. But the lump on my head where I had struck a stone and my aching head itself were very real, and within the circumscribed limits of my eyes I saw broken, wilting Trees of Life. But what had happened? Why was I alive? Why hadn't the monster seized me, devoured me? These questions flashed through my mind instantaneously. Whatever the answers, the fact remained that I was alive, and aside from my bruised head, uninjured. No doubt the beast had gone stumbling on in its mad pace without noting my fall. There seemed no other explanation, and if so, he might be, most certainly would be, coming back to finish me off at any moment.

I was convinced this was the case and was on the point of sitting up, when my heart seemed to cease beating. Close at hand was a strange noise, a sort of deep-drawn, sobbing sound like wind through trees. But it was not continuous like wind, rather it appeared to come and go at regular intervals. It was—yes, there was no doubt of it—it was very like some creature breathing, only it was a hundred, a thousand times louder. The blood seemed to freeze in my veins. Could it be that the monstrous thing was lying or standing close at hand, awaiting my first movement, my first sign of life to leap upon me? Cold sweat stood out on my forehead. What could I do? To remain there quiet, with that terrible mysterious sound throbbing in my ears, knowing that the fearsome gigantic saurian was within a few yards, would drive me stark, staring mad. Yet if I moved, if I attempted even to turn my head to *see*, those awful jaws or those talon-clawed feet might close upon me. Never in my life have I been so terrified, so sick with fear, so near to losing my reason. Anything, I decided, was better than not knowing. With a tremendous effort I gathered myself together, tensed my muscles, controlled my shaking limbs, preparing to leap to my feet and dash off in a last despairing effort to escape. And then—horror of horrors—a shadow

fell across me; and above my face, blotting out the sky, appeared the creature's head!

The wicked baleful green eyes were within a yard of my own. The great horny, driveling jaws partly opened, and like a streak of light, a huge red-forked tongue shot forth and touched my body! I drew back, cowered, and despite every effort, screamed. With a quick jerk the head was drawn back and a sharp hiss, loud as escaping steam, came from the beast's nostrils.

Once again the gigantic head swayed like a huge serpent above me, the tongue played over my body. Then, when I felt that all was over, the head was lifted, the beast gazed at me with what I could have sworn was contempt, and slowly moved away!

I was so amazed, so overcome by the reaction from the strain, that without thinking, I jerked upright. Within a dozen yards of where I sat the huge monster was grazing calmly, contentedly, upon my best maize. At my movement, as I rose to my feet, he lifted his head, craned his neck and peered at me curiously. Then, apparently satisfied that I was quite harmless, as well as worthless, he resumed his meal. For a moment I was at an utter loss. Why hadn't the creature killed me, devoured me? Then sudden knowledge dawned upon me. He was an herbivorous monster! He was not carnivorous! I was perfectly safe! Then, as I noticed how unafraid, how apparently docile was the monster, a mad, insane idea entered my mind. Could the great beast be tamed, domesticated? What an accession such a monster might prove, if tractable and taught to obey orders! Half a dozen elephants could not do the work this monster was capable of performing. To be sure—as I studied him, now entirely over my terror of the creature—he did not appear very intelligent, his head was too small in proportion to the body. Still, he must possess a certain amount of brain, else he would not have realized that I was harmless, as well as inedible. But he might also possess an irascible temper. The way in which he had pursued me indicated that.

Still, now the idea had taken possession of me, I was fascinated by the possibility, and moreover, the confounded beast had done me a tremendous amount of damage and it was his duty to pay for it in labor. Besides, if we didn't do something with him, he'd soon destroy all the cultivation in the valley. It would never do to permit him to roam about at large. He must either be killed or captured and—the thought came to me for the first time—one was about as difficult as the other. All this time I was unconsciously drawing nearer to the monster, who appeared wholly oblivious to my proximity. Almost before I realized it, I was close beside him, for somehow I felt no more fear of the gigantic thing than of an elephant. And then, drawn by some inexplicable fascination, I stretched out my hand and patted the thick, scaly hide. The skin twitched, much as a horse twitches his skin to dislodge a fly, but otherwise the monstrous beast gave no indication that he was aware of me or my act. Growing bolder, I picked up a stick and scratched the beast. Lifting his head, he twisted his long neck about and peered at me, munching a half dozen cornstalks as he did so. Then, apparently satisfied that he had nothing to fear, he continued feeding. I was almost tempted to climb upon his back, for I had unconsciously reached that stage of adventurous bravado that causes the small boy to enter an unknown cave or to see how near the verge of a precipice he can walk. But I wisely desisted, and deciding that if anything was to be done, it must be done while the beast was present and before he caused greater damages, I hurried off to notify the people of my find and of my somewhat wild idea of attempting to capture and domesticate the beast.

Much to my surprise, my suggestion met with almost unanimous support. Man has an inherent and irrepressible instinct to domesticate wild creatures, and I do not believe that human beings could exist happily without pets or tame beasts or birds of some sort. Just as in my younger days those extinct creatures, the elephants, which—strange as it may seem—were considered gigantic, invariably appealed to everyone and proved the most fascinating of all domestic animals, so this gigantic, vegetable-eating monster instantly appealed to the people of our valley. As if going to the market-fair, they came hurrying from every direction, leaving their duties and their labors, swarming towards the spot where the huge beast was still regaling itself on my maize. Despite my assurances of its harmless—or at least its peaceful—character, they kept at a safe distance for the most part.

ACCOMPANIED by a number of men—among them the Inca, Frank, and Padre Antonio, I advanced to a position close to the beast and—perhaps to show off a bit, for the monster was my find and I rather regarded him as my personal property, I gathered a great armful of ripe ears of maize and—with bold front although nervous inwardly—I moved around in front of the creature and tossed the maize ears beneath his nose. With a sharp hiss he drew his head back, then, heaving himself a few feet forward, he seized the corn that lay within a yard of where I stood. Everyone cheered, but when, having devoured the corn, he unexpectedly thrust his great snout almost into my face in a search for more, and with an involuntary cry I leaped back, everyone shouted with laughter. This rather put me on my mettle, and quite recklessly, although it took all my courage to do so, I advanced with the mad idea of stroking the thing's head or neck. But there were limits to the monster's confidence in man. Opening his great mouth, he uttered a deafening hiss and emitted a blast of fetid-smelling breath, that lifted me from my feet and blew me aside like a bit of chaff.

Roars of delight, bellows of laughter, a thunder of hand-clapping came from the watching thousands. Ruefully I picked myself up, unhurt, but with more respect for the beast. Still, my discomfiture had proved the thing was not really dangerous and was not ugly-tempered, for had he been, he could just as easily have snapped off my head with his horny, beak-like jaws or could have knocked life from my body with a blow of his head. But one didn't know just how far one could go without arousing more violent resentment, and I retired to a safe distance to confer with the others as to how we were to make the monster a prisoner. If he once took it into his head to move off, to return to the jungles, we were powerless to stop him. If anything was to be done, it must be done while he was quietly feeding. Some suggested erecting a stout fence of tree trunks about him, others thought the best way was to secure him with cables. But neither method appeared very practical. The man in favor of trussing the beast up admitted he would not volunteer to make the ropes fast to the monster, and it was obvious to all that to erect a palisade that would hold him would require weeks of labor, and that unless it was far stronger than we could hope to construct, the creature would walk through it as if it were paper.

Presently the monstrous thing half solved our problem for us. Quite oblivious of the onlooking crowds he squatted down, rolled over on one side, extended his neck on the ground, rested his head on a pile of broken maize stalks, closed his eyes and apparently slumbered. Here was our opportunity. It would be comparatively simple to place heavy ropes, even chains, about those great feet, about the long neck, and to secure them to

some large trees conveniently near. We had no doubt that he would sleep soundly for some hours, and his thick hide could not be very sensitive. Anyhow, it was our chance, and as soon as a supply of our heaviest ropes and what chains we possessed, could be brought, we proceeded to attempt our undertaking. No one wanted to be the first to put the bonds on the monster, so half a dozen of us slipped up together.

It was little trouble to place cables about the immense legs sprawled out so conveniently, but it was a far more ticklish job to get ropes about the monster's neck. But by poking a rope beneath it by means of a long, forked stick, it was finally accomplished. Then, to make assurance doubly sure, we proceeded to attach more ropes, to form a veritable network of cables and lines over the creature, until he reminded me vividly of Gulliver bound by the threads of the Lilliputians. At last only his head was left free, and having become somewhat contemptuous through familiarity, or perhaps feeling confidence in the strength of the ropes to hold him, I crept forward, and with Frank's aid managed to slip a sort of bridle of rope around the monster's snout, with a long halter which we secured to a stout stump. Care had been taken not to bind the creature so closely he could not rise to his feet, and now we had (we flattered ourselves) secured him, everyone was impatient to see what happened when he woke up. Many were for poking or otherwise arousing him, but I argued against it. That might anger the creature—even men, when rudely awakened, are apt to be cross and peevish—and he might struggle, and thrash about, and even if he did not break loose, he might become so furious it would be impossible to tame him.

So for hour after hour we waited, watching the sleeping giant expectantly. At last, when our patience was well nigh exhausted, the monster uttered a deep sigh that sounded more like a gale of wind, took a deep breath, half-opened his eyes, stretched his neck and tried to yawn. But the rope bridle held his jaws and a strange, puzzled expression came into his eyes. He shook his head, rubbed his nose on the ground, and twisting his neck about stared at us and at his own body. Then, apparently realizing something had been taking place while he had slept, he heaved his mighty bulk erect. Scores of cords and ropes snapped like threads but those about his legs held. For a brief instant he stood quietly, examining himself and his mysterious bonds. Then, with a mighty effort he lurched forward, only to be brought to his knees. Even then he did not seem angry nor furious. Rather, he seemed puzzled, and bending his neck, he tried to bite the cables that held his feet. But the halter brought him up short.

For the first time anger surged in him. He hissed, bellowed, champed his jaws, thrashed viciously with his short heavy tail, heaved his bulk first to one side then the other, made short rushes forward and backward. But all to no purpose, and at last, showing far more intelligence than I had given him credit of possessing, he settled down quietly as if deciding to make the best of his fate. We were elated. Judging by his actions, the monster was tractable and should be readily tamed. Stepping forward, one of the men seized the halter rope and gave it a tentative jerk. At this the apparently docile beast became instantly transformed into a maniacal mountain of fury. With inconceivable speed, the head darted forward and came within a foot of the man holding the halter. Had it struck him, he would have been crushed as by a falling tree. Rearing and plunging, the creature snapped two strong chains as if they had been twine. He swayed back and forth, he hissed until the crowd drew back with frightened cries, and his eyes fairly blazed. But the other cables and chains held, and at last, tired, exhausted with his exertions, and perhaps realizing the futility of his efforts, he sank down upon the earth. By means of long poles we pushed bunches of corn stalks, bundles of sugar cane and other delicacies within reach of him, but he paid no heed whatever. He was sulking, and by the way he eyed us, I felt sure he at last associated us with his predicament.

For that matter we were in something of a predicament ourselves. The monster was our captive, but what could we do with him? To be sure he could not roam about and cause more destruction, but on the other hand we could scarcely keep the poor thing tied up to starve to death in that spot.

And how did one go about taming such a monster? I had read (as had the others, no doubt) of wild elephants, when captured, being tamed and subdued by domesticated elephants. But I could not recall a single such tale that had described how the domesticated elephants had been tamed in the first instance. And we had no domesticated specimens of this beast to use in taming him.

In fact, we were rather afraid that we had literally caught a tartar and not by any means the least of our fears was that there might be others of his kind in the vicinity, that they might come to his rescue, and that we might find ourselves beset by a herd of the angry beasts. Even had we so desired, none of us would have dared go near enough to release our prisoner. So at last we decided that the best thing to do was to leave him to himself for a few hours and, feeling sure the monster could not escape, we ordered the crowd to disperse and returned to our various homes and occupations.

CHAPTER X

The Power of Doughnuts

WE had placed too much confidence in our ropes, or rather, perhaps we had underestimated the strength and resourcefulness of our captive. At any rate, when we revisited the spot the following morning only frayed and ravelled ropes and churned-up earth greeted us. The monster had made good his escape during the night, and deciding it was hopeless to try to recapture him or to tame him, we rather reluctantly agreed that we must find means of destroying the beast. He was nowhere within sight, and the great number of tracks he had left during the preceding day and night, as he had played havoc with my trees and corn, rendered it difficult to follow his latest trail. Moreover, we proceeded cautiously, for we were not at all sure of the temper he might be in after having received such ungracious treatment at our hands, and we had no desire to come unexpectedly upon him. So, keeping a sharp lookout, we moved slowly forward, following what we thought were the most recent of the huge footprints.

The nearest houses were more than a mile distant where, in a grove of fine trees, was my own residence, Frank's house, and my granddaughter's home—for Mathilde was now a matron with kiddies of her own and I was twice a great-grandfather. Mathilde was an excellent cook, and on this particular morning while we were searching for the escaped monster, she was busy cooking doughnuts.

Having placed a great pan full of the delectably browned rings in the window to cool, she turned back to the stove. Presently the light within the room was dimmed as if a heavy cloud had obscured the sun. Half-turning, she glanced at the open window wondering if a storm was brewing, and at what she saw she

shrank back, cowering in a corner of the room, too horrified even to scream.

Filling the window, silhouetted against the brilliant sunlight, was the gigantic, terrible head of the escaped monster! She dared not leave the room; to reach the door she would have to pass within a few feet of the window, and she was far too terrified by the apparition to reason that the beast's head was much too large to enter the aperture. Then, as she watched it, scarcely daring to breathe, unable to move, she noticed that the immense beast was sniffing at the pan of doughnuts. Then his tongue darted out, and with a sharp hiss of surprise and fright at the touch of steaming hot cakes, he drew back. But only for a moment. The next instant the great jaws opened, and before Mathilde's eyes, doughnuts and pan vanished in the capacious mouth!

For a moment the huge jaws champed, the pig-like eyes blinked, and then with a gulp, the hot doughnuts were swallowed and the bent and battered tin was dropped clattering to the ground.

Still terrified as she was, Mathilde thought only of escape from the room. If she could only keep the monster busy she might slip by him and reach the door. A second lot of doughnuts stood on the table, and summoning all her courage, she pushed the table under the window and dashed for the doorway.

Shaking with fear lest at any moment the great beast might wreck the house in his anxiety to reach the doughnuts, for to her terrified senses he seemed large and powerful enough to force a way through the strong stone walls, she gathered up her youngsters, peered about to be sure the beast was still at the rear of the house, and fled through the grove, where she met us just as we reached the first of the trees. Breathlessly she told me what had occurred, and, having calmed her fears somewhat and told her to go to Frank's home, we hurried forward. Looming half as large as the house, the great bulk of the creature was still there. Approaching cautiously we discovered that apparently the monster was securely captured. His great head was wedged in the window-casing, and seemingly, despite his efforts, he could not withdraw it. Like many a human being, he had fallen a victim to his appetite. But as we entered the house and looked into the kitchen, we discovered that the monster was not struggling to escape but was bent only upon securing the doughnuts just beyond his reach. Everyone roared with laughter at the expression upon the creature's face. With rolling eyes upon the dainties so near, sniffing noisily as the appetizing aroma rose from the freshly cooked cakes, and with long tongue extended, he wriggled and strained and grunted to force his broad, armored head a few inches forward.

But the doughnuts might as well have been a mile from him as far as his efforts were concerned. The window-casing was of stout, hard-wood timbers set deeply into the stonework, and though he might easily have battered in the window with a blow of a foot or the weight of his great body, his head had become so jammed that he could exert no leverage. A sudden whim seized me, and stepping forward, I secured a couple of the doughnuts and—rather nervously despite the fact that I was sure he could do no harm—I extended them towards him. With a low bellow, not unlike the purr of a gigantic cat, he opened his great jaws expectantly.

As I tossed the cakes into his mouth and he closed his jaws upon them, he reminded me of nothing so much as an elephant receiving peanuts from a small boy. And it seemed just as ridiculous for this monster to be literally begging for doughnuts, that were mere crumbs in his immense mouth, as for an elephant to bother with such tiny things as peanuts. But the really important problem was how to get the monster's head from the window, and what to do with him in case we succeeded. Possibly, I thought, if the doughnuts were removed, he might work himself free.

I was quite correct in my surmise for, having taken possession of the cakes, we hurried outside the house just in time to see the beast jerk his head loose from the window-casing.

For a moment he stood winking, blinking, gulping, testing his jaws tentatively as if to assure himself no harm had been done. Then a sudden gleam of interest shone in his eyes, he sniffed the air, and before I realized what had happened, he had lurched forward, his great head swooped at me, and half a dozen doughnuts were gulped from the pan in my hand! Startled and frightened I sprang back, dropping the pan with a clatter. But the beast paid no attention to me. Like a famished dog he lapped up the scattered doughnuts and gazed at me with open, waiting, expectant jaws as if begging for more.

There was something so ludicrously hopeful in his expression, something so like that of a harmless puppy, that all fear of the gigantic beast fled from me, while the others, gathered near, burst into hearty laughter. "Hurry up and get some more doughtnuts," I called to Frank, "or pies or cakes or anything of the sort you can find. He's fallen for Mathilde's cooking and the doughnut is mightier than the rope."

FRANK was back in a moment with a basket filled with a miscellaneous assortment of pastry. Instantly the giant beast forgot me and lurched—there is no other word to describe his movements—towards Frank who, dropping his basket, took to his heels. But I had, as I say, lost all fear of the beast, I had no intention of letting him gobble up all the available cakes, pies and cookies at one time, and jumping forward I grabbed the basket from under his very nose. Gingerly I extended half of a pie towards him. Instantly his vast mouth opened, I tossed the pie into his gaping maw, and turning, walked slowly away. For a moment the beast hesitated and then, like a giant colossal puppy, he came lumbering after me. Every few moments I would halt, toss him a cake or a pie and then continue on my way. I turned to right to left. Wherever I went he followed, until finally, having enticed him into the stone-walled cattle corral, I dumped the contents of the basket on the ground and let him eat his fill.

"As long as we can supply him with doughnuts or pastry he's as gentle as a kitten," I declared, as we gathered about to watch the monster. "But we'll have to keep a small army of cooks busy to supply him."

The others laughed and Frank reminded me that while all I said was obviously so, it didn't solve the problem of capturing or killing the creature. That the stone walls of the corral would not hold him if he took it into his head to decamp, and that he would need a great deal more than pastries to support his huge bulk and hence would continue to destroy our crops. But somehow, the idea of killing the great, harmless and naturally gentle thing did not appeal to me, and I declared that in my opinion he'd stick to the corral or the vicinity of the house as long as there were doughnuts or cakes to be had; that if cut cane, corn and other provender were brought to the corral, he would have no incentive for wandering about, and that, in a short time, he would be as thoroughly domesticated as the cattle.

"All right," said Frank, "if you want the monster in your back yard or poking his head into your windows, go ahead and make a pet of him. But I'm not anxious to have him about my place, and you won't get Mathilde to come back here as long as he's in the neighborhood."

It was then that Padre Antonio, who had joined us, suggested a solution of the *impasse*. He reminded us of the big walled courtyard of an ancient ruined city on the other side of the valley. It was a rectangular space sunken several yards below the surface of the earth and with the sides faced with closely-fitted, immense stone blocks. Once within that, the creature could never climb out, and as the Padre pointed out, by securing a good supply of pastry, we might be able to lead the brute to the spot, and by blocking up the one entrance, have him securely confined.

Everything worked out to perfection. Men were sent ahead to prepare huge logs and stones for closing the gateway; others were despatched to gather quantities of sugar cane, corn and vegetables to be thrown into the court, and messengers hurried to the various houses in search of cakes, pies and anything they could secure in the way of pastry. And though several hours were consumed in coaxing the beast across the valley, for we were compelled to halt and feed him at every few yards, we eventually saw him safe in the sunken plaza and quietly munching the food, which we had specially prepared for him.

There is no necessity of relating in detail all the subsequent events regarding the domestication of the monster. Enough to say that within a very short time he was as tame, as tractable and as gentle as though born and bred in captivity; that with little real difficulty he was trained to carry burdens, to haul an immense wheeled vehicle, and to use his stupendous strength in performing various tasks that previously had required the united efforts of scores of men and many oxen. Even the children lost all fear of the great beast and made something of a pet of him, and he, in turn, appeared to be fond of them. He would permit them to frolic about him, to clamber over his back and neck and seemed thoroughly to enjoy it. He was, in fact, a most valuable acquisition to the community, even though a special keeper had to be appointed to look after him while the keeper's wife was kept constantly busy baking gigantic doughnuts for the creature in large quantities.

In time, too, we secured three more of the monsters—though all were much smaller than the first. Recalling the methods of taming wild elephants, we made use of the first beast to control and subdue the others. But there was really little difficulty encountered. The creatures all seemed to have a mania for doughnuts—though other pastries appealed to them also—and once they had discovered that by remaining quietly in the big courtyard and behaving themselves they would be rewarded with their favorite delicacies, all went smoothly. And then, a few months after our first capture, one of the creatures presented us with a litter of sixteen little beasts.

They grew with amazing rapidity and within six months were almost as big as their parents and were as thoroughly domesticated and well trained.

In the meantime many other events had been transpiring. Among other things our operator had managed to get into radio-telegraphic communication with a community of people at Chavin, some two hundred miles north of our valley. Hitherto we had never known there was such a community and they explained that they had only recently erected a radio-telegraph station, having brought the various parts, bit by bit, from other places in the hopes that they might discover that they were not the only survivors in the land. To find that there were hitherto unknown and unsuspected people dwelling so near us came as a great piece of news, and I cannot hope to express the delight and excitement we found in being able to exchange words, to exchange accounts of experiences with these Chavin people.

IN many ways their history was similar to our own. Just as the nucleus of our community had been the few survivors from the coasts of the south plus the groups and individuals already in the mountains, theirs had been formed of a few survivors from the northern coast towns with additions from many small interior villages. But they had found no friendly, intelligent and cultured Inca to aid them, no Trees of Life, and no such lovely valley as we possessed.

Neither had they an airplane, radio-telegraph equipment nor many of the articles we had been fortunate enough to secure at Rincon. Like us, too, they had been attacked by the brown Misguided Ones, and though they had driven off the savages, they had lost heavily and had been forced to flee for safety to a great stone city and fortress that one of their members recalled having seen at Chavin. Here they were in possession of an impregnable defense, and had begun to increase and to prosper. But they had had internal troubles and dissensions. Some of their numbers had been rough, brutal, lawless men from the mines. These had discovered how to make intoxicating drinks, they had become disorderly, dangerous, and finally had broken into open revolt. Although the better class had won, it was with considerable loss and the malefactors had been condemned to death. Still, the community had been steadily increasing and improving. Several expeditions had been made to the coast and to nearby deserted towns; many useful things had been obtained, and with great difficulty and always with the hopes that there were others within reach, they had at last succeeded in establishing a radio-telegraph and to their inexpressible joy had found we were not far distant neighbors. But they knew no more than ourselves of the fate of the various isolated communities with whom (in the early days) we had been in communication, and we could only assume that these had been wiped out by savages or by savage beasts. Those at Chavin had seen nothing of the man-eating monsters we had encountered, and neither had then suspected the presence of the immense beasts we had domesticated. But they had been terribly afflicted with gigantic, bat-like creatures, huge, winged monsters with long jaws, armed with rows of sharp-pointed teeth, that came forth at night and boldly attacked anyone who ventured forth after sunset.

The community was much smaller than ours—numbering barely one thousand all told—and having learned of our progress, our conditions and our advantages, they suggested that the two communities should join forces. It was a most excellent idea, but one which, it seemed, would be practically impossible to carry out.

For the thousand inhabitants of Chavin to attempt a two hundred mile journey over untrodden, trackless, jungle-covered mountains filled with savage beasts and men was not to be thought of. And it was equally foolish for us to dream of migrating to Chavin. Of course we did not even contemplate such a move, and our schemes and plans were all devoted to some means of bringing those of Chavin to our valley. It was suggested that the great, domesticated beasts might be employed, that they could force a way through the jungles and would protect those who rode upon them from harm. But there was the chance that the beasts might revert to their wild state once they were in the forest; while we had no faith in their ability to attack or drive off such creatures as the man-eating monsters and finally their movements were so slow that long weeks—possibly months—would be required for the journey, even if successful. Had we possessed a supply of fuel for our airplane we might have made a number of trips and thus have transported the Chavin people a few at a time, for they told us there was an excellent spot for landing at their settlement.

But the small quantity of fuel that remained to us would not have carried the machine half way to Chavin. It was then that I bethought myself of the stranded, partly wrecked ship I had discovered on my expedition to the coast.

If we could by any possibility repair and float that ship, we might be able to sail north, land on the coast near Chavin, and there embark all the inhabitants of the place, for they assured us that they could reach the shore in comparative safety and without great difficulty, their settlement being less than a dozen miles from the sea.

But would it be possible to undertake such a tremendous job as to repair and refloat the vessel? And if undertaken, could we hope for success? We discussed the matter at great length. Among our members were two men who had been among the original members of the community and who had been at Rincon for the purpose of erecting mining machinery. Both were what we in those days called engineers, and one had, in his younger days, been in charge of a steam vessel. Had they possessed adequate tools and machinery, they stated they felt sure the ship might be reconditioned in time, but without these it was doubtful. Moreover, they could not say definitely until they had visited and inspected it. To do that was a long and dangerous undertaking, and finally there was the question of refloating the vessel even if she were repaired. But this problem I solved by reminding them of our herd of monstrous beasts. If we could get a number of these great creatures to the coast, we could employ them for digging a great ditch leading from high water mark to the stranded vessel, and—so stupendous was their strength—they might even be able to drag the ship or at least start her sliding seaward.

It would be of course a long, heartbreaking, most difficult and perilous undertaking, but we had become accustomed to dangers, to difficulties, and time was of no object. Moreover, there were one thousand fellow men and women calling to us, anxious to join us, longing for our companionship, and that incentive alone was enough to cause us to try almost any feat. So it was at last decided to organize an expedition to the coast, to make an inspection of the ship, and if the engineers decided it possible, to at once start work upon it.

CHAPTER XI

To the Rescue

THE journey to the coast was accomplished safely and without incident. As a test, we took two of th egiant beasts with us, selecting a pair that had been born and bred in captivity, and these greatly aided us. They had no difficulty in ploughing a way through the thickest jungles. They afforded a means of transporting great quantities of supplies and equipment, and often, when the going was bad, we rode in ease and comfort upon their great backs. Best of all they showed no signs of a tendency to revert to a wild state, and as we had prepared a vast quantity of their favorite doughnuts, they worked willingly and seemed thoroughly to enjoy the trip through the forests. The ship still remained where I had first seen it, though during the time that had passed, vast quantities of wind-drifted sand had blown up about it and a tangle of vines and trees almost hid it from sight. But in a way these had been a help rather than a hindrance, for they had served to protect it from the elements. As the vessel afforded the driest, safest and most comfortable spot in which to camp, we cleared away the growths, disposed of countless bugs, beasts, reptiles and other living things that swarmed about it, and made ourselves as comfortable as possible, our two beasts being tethered (for they had long since become accustomed to being secured by ropes, which they could easily have snapped had they desired).

Much to our delight the vessel was found in far better shape than we could reasonably have expected. Her iron decks, to be sure, had rusted through in spots. The portions of her hull exposed above the accumulated sand were corroded, thin and in bad shape; her funnels were mere layers of flaky rust, and most of the woodwork had decayed and was riddled by ants and worms. But below decks everything had remained very well preserved through the years that had passed since the tidal-wave had left her here. Parts of the boilers had rusted out, many pipes and fittings would have to be renewed and replaced, but the engines were in good shape and, to the engineers' delight, they found she had a very completely fitted-up machine shop with a fine assortment of tools.

Both men agreed that she was well worth repairing, although they shook their heads dubiously in regard to her seaworthiness. But as we intended to use her for one trip only, and that a short one, and as the ocean was usually calm along the coast, that question did not worry us. The most vital point was whether or not it would be possible to float the vessel, if she was put in serviceable shape. The only means of doing this would be by the help of our powerful beasts, and the only means of ascertaining if this would be feasible was to try them. There is no need to describe in detail our preparations for the test. We managed to rig up some huge scrapers and found that the beasts, once they understood what was required of them, dragged the huge affairs with ease and moved small mountains of sand in a few hours. Then one of the engineers declared that as soon as the boilers were repaired and it was possible to get up steam they could rig up a steam-operated shovel or dredge to expedite excavations. And as an examination proved that a comparatively short and shallow ditch would be all that was needed to allow the incoming tide to reach the ship and so lift her free from her bed, we all felt confidently that, ere many weeks had passed, we would be setting off on an ocean voyage to the rescue of our fellows in Chavin.

The engineers lost no time in starting work; a force of men was sent down, together with six more of the *colossadons*, as we now called the great beasts, and the old wreck became a scene of busy industry and life.

It reminded me of old times to hear the din of riveting, the deafening noise of hammers pounding rusty iron, the creak and whine of tackles and winches, the squeal of pipe-threading machines, and the countless noises issuing from the bowels of the ship. Meanwhile the six colossadons were steadily reducing the great heaps of sand about the hull and were ploughing and scraping a huge trench from the stranded hulk towards the distant sea, while scores of men were laboring in work-shops and under sun-shelters, sawing, hewing, planing timbers and planks and performing a hundred other tasks. Work went on apace, and it was a great day when at last the boilers had been repaired and the fires in the furnaces lit. And when a column of thick black smoke poured from the newly erected funnel and with a rattle and clank and hiss of steam the hoisting engines on deck were set in motion, we felt that the worst was over and that our final success was assured. Hundreds of people flocked from the valley to the coast to see the show, for many had never seen a ship, nor for that matter a steam engine, and during the weeks that had passed since we had started work, we had constructed a fairly good road between ship and valley, a road over which the colossadons drew immense loads or carried heavy burdens back and forth.

To carry forty or fifty persons on its back was mere child's play for one of these great beasts, and there was no danger from either wild animals or wild men when riding the creatures. We had had ample proof of this during the first few trips to the coast. Once, a yelling horde of savages had dashed at us, but the instant they caught sight of the great lumbering colossadon accompanying us, they had screeched in terror and had fled as if the devil himself were after them. And on another occasion, when a pack of ravenous, tiger-like beasts, with great dagger-like teeth and sprung from the jungle, our colossadons had seemed suddenly to go mad.

Emitting strange hissing bellows, they had flung themselves with wholly unexpected agility at the snarling giant cats. With the speed of striking serpents their heads had darted forward with snapping jaws, and seizing the tigers, had tossed them right and left to be trampled under their ponderous feet. Not until the last of their natural enemies had been destroyed or driven off did they quiet down and resume their way, as tractable as ever. Obviously all other creatures gave the beasts a wide berth, and after a few journeys back and forth, we never again met either bands of the Misguided Ones or savage beasts of any description. And though at times I, as well as the others, dreaded lest another of those horrible man-eating monsters might appear—for we felt that against these, our colossadons would have little chance of victory—it was such a remote chance that we gave it little consideration.

OF the actual work upon the ship I saw little, for I had plenty to occupy my time in the valley and in attending to the transportation of men and supplies of which I was in charge. But I made frequent visits to the scene, and I was amazed at the speed with which the two men in charge transformed the half-wrecked vessel, considering the few resources at their command.

The hull was patched, new decks of wood were laid, cabins and fittings replaced, the small boats repaired or rebuilt, and although to my unprofessional eyes it still appeared a hopeless tangle and confusion, an inextricable litter and mess of pieces of machinery, steam pipes, intricate mechanisms, cables, wires, and a thousand and one other parts, of which I did not even know the names or uses, yet it was all plain and simple enough to those in charge, and order came gradually out of chaos. And when the hoisting engines were ready for us, work went much faster. Not only did these labor-saving machines perform a hundred duties that had formerly necessitated scores of men, but soon they were put to work excavating the sand about the ship. Great iron buckets were constructed which could be lowered and raised or swung in any direction by means of cables attached to long arms or beams, and at one scoop tons of sand were lifted, swung aside and dumped into huge vehicles drawn by the colossadons. Long before the interior of the ship and her machinery were in serviceable condition, the sand had been completely removed from about her hull, and all that remained to do was to complete the ditch that would allow the sea to flow in and float her. Yet all was due directly to our tame monsters. Without the colossadons we never could have undertaken the work with any hope of success, and we all blessed Mathilde's doughnuts.

Meanwhile, we were in constant communication with the Chavins and kept them advised of what we were doing and how work was progressing. They were elated. We seemed like deliverers from heaven to them, for they were having a hard time of it. The land in their vicinity was poor, their crops were not a success, and they had been hard put to it to secure food. In one way they were fortunate. They had a good supply of firearms and ammunition, and by hunting and fishing they had managed to subsist. But they were constantly fighting wild beasts; the great, flying creatures were a constant menace, and they were continually suffering from strange maladies. Worst of all, they had no real leaders, no one with enough intelligence, initiative and ability to take charge, and no organization such as ours. Everyone did about as he or she saw fit. There was no unity of effort, no community spirit, and as a result, they were steadily deteriorating, reverting more and more to barbarism. Those who communicated with us were aware of this, for they were the more intelligent members of the community, but they did not appear to be able to change conditions. At the time we thought it the result of the characters of the original members of the community—mainly uneducated, rather uncouth and rough laborers and people of humble origin. But later we decided it was the result of something in the climate or the environment, for under new conditions they completely changed. But whatever the cause, it was evident that the settlement was doomed if left to itself, and that the only hope was to rescue them and bring them to our valley.

There is one matter which this brings to mind which I have neglected to mention. I have spoken of the several astronomical observatories in the Andes, and particularly of that one near Rincon. It was inexpressibly sad but utterly unavoidable, that the men in charge of some of these isolated stations should have perished miserably, just as the members of the smaller isolated communities perished. But some managed to reach our valley, and those at the station near Rincon had come with us when we migrated to Chincana.

But of course they had been compelled to leave their largest and best instruments behind, and it was not until we had the domesticated colossadons that there was a possibility of securing the instruments and of establishing an observatory in the valley. Few of us could see the real need of doing this, for the incalculably ancient and very simple Incan *Intihuatana** served our purposes for computing time, and as long as the moon did not again go mad, we had little interest in the heavens. Moreover, our faith in astronomers had been rudely shaken in those early days of terror, for they had failed utterly to warn the people of the impending catastrophe. But when the work upon the ship having progressed to the point where ultimate success seemed assured, we began to discuss who would be competent to navigate the vessel, we discovered that there was no one, other than the astronomers, capable of doing so. And they declared that unless they could take a series of observations and could check up on the sun and stars and bring their astronomical data up to date, it would be suicidal to attempt to navigate the ship. They pointed out that to determine longitude, they must have accurate time and ours was merely approximate; that all the old instruments aboard the ship and all of the former rules for navigating had been based on the solar system before the moon had run wild, and that they would be forced to work out what was practically a new system of navigation.

Had the coast remained unchanged, they pointed out, it would have been a simple matter to have navigated a vessel by landmarks. But as it was, there was nothing of the old remaining and there would undoubtedly be many new unknown and exceedingly dangerous reefs, shoals and rocks to endanger our lives.

We were thus convinced that all our labors would be for nothing, and Chavin could never be saved, unless the instruments were brought from Rincon or unless the astronomers could work in the old station.

*Literally, "Where the sun is tied." A form of sun-dial.

And as the latter solution seemed the easiest and the quickest, arrangements were at once made and an armed expedition with four colossadons set out with a large supply of food and other necessities. The adventures of the party have no place in this narrative, for I knew nothing of them at first hand. The important part is that they succeeded and that, from that time on, we maintained a line of communication with the observatory and that eventually the entire equipment was transformed to Chincana.

Neither is it necessary to describe in detail every event that led up to that day when the ship on which we pinned our hopes was ready for sea and final preparations were made for floating her. Already the results of the astronomers' observations had proved valuable. They had calculated the time of the tides, and by means which were incomprehensible to me, they had plotted the course to be followed in sailing to the point where we planned to meet the refugees from Chavin. Thousands flocked to witness the last step in our months' long labors, and the valley was left almost deserted.

Upon the ship, now appearing like new in fresh paint and with steam up, were the crew and officers, and stretching from her to the verge of the sea, miles distant, was the great ditch into which, with the rising tide, the water would come rushing and—so we hoped and prayed—would raise the vessel from her cradle of sand. In the old days of insignificant twenty-foot tides, the vessel would have remained high and dry forever, but with a two hundred foot tide it was a different matter, for when water rises at the approximate rate of thirty feet an hour, it comes with a rush, and our greatest fear was that the wall of water roaring into the channel we had dug might carry the vessel farther inland or wash completely over her or otherwise damage her.

But every care had been taken to avoid any such terrible catastrophe. Long, immensely strong cables had been led from either side at an angle towards the sea and had been securely fastened. Other cables were attached to the harnesses on waiting colossadons ready at a command to lurch forward with all their stupendous strength, and orders had been given to start the engines and set the great screw of the ship in motion the instant the water came pouring into the canal.

IT was a tense moment. In a few minutes we would see all our long and weary labors, all the hopes of rescuing our fellow men utterly destroyed or would see our herculean task crowned with success. And I think that all—that every one of those waiting, expectant thousands—saw in the success or failure of the launching something much greater, much more important than the immediate purpose of our vessel. As far as we knew, that ship would be the only vessel upon the vast oceans of the planet. It would be the first, the only means of learning of the fate of hundreds of millions of human beings, of discovering what had taken place, and it would be the sole and only means of getting in touch with such other members of the human race, as might survive in other lands, perhaps of saving countless lives, of uniting the existing peoples once more. Never, we felt, in the whole history of the world had the launching of a ship been fraught with such vital importance, such romance, such drama, such hopes of the future. It was our argosy, our ark, and a strange thrill, a great elation, a sense of inexpressible power and triumph filled our breasts at the thought that we would conquer the limitless seas as we had conquered all obstacles we had met, that we of Chincana would be the first of the stricken world to again sail the seas, to set forth on voyages of exploration, of discoveries, of humanity, such as the world had never before known. That our little community in the Andes would be the first to triumph over the forces of nature, the first to rise above the ashes of universal disaster, the first to take steps to reestablish the old order of things, the first to enable the remnants of our race to join hands and build up the civilization and the commerce and effect the rejuvenation of the entire world.

And when, in the distance, a foaming crest of water was seen rushing like a mighty torrent into the great ditch, we watched breathless, with fast-beating hearts, torn by hopes and fears. No one spoke, no one uttered a sound. The silence was broken only by the faint hiss of escaping steam from the waiting ship, the occasional rattle of harness as an impatient beast shook himself, and the distant roar of the onrushing water.

Then, loud and clear, breaking the stillness like a clarion note, rang the voice of Padre Antonio. "Let up pray!" he cried, and like an echo came the ringing tones of the Inca: "Inti, hear thy children's prayers!"

Instantly every head was bowed, and from thousands of lips prayers to the Almighty—prayers to God and to Inti—arose until the whispered words sounded like a wind rushing through mighty trees, and the sound of the oncoming tide was drowned.

And, as if in answer to our prayers, the furious, irresistible, foam-capped wall overflowed the confines of the trench; it broke and spread harmlessly over the broad mud-flats and beach, and smoothly, like a great tranquil river, the muddy water came onward. It lapped the stern of the ship. It swirled about her sides. With a hoarse bellow of her whistle, the propeller began to churn. The colossadons strained at the cables. Higher and higher the water rose. It began to overflow the banks of the trench. For a moment the vessel remained motionless. We watched with bated breaths. Would she float? Were we doomed to failure at the very last.

And then a deafening roar, a cheer from thousands of throats drowned every other sound. The ship rocked, swayed, floated! The great mooring cables slackened and were cast loose. The colossadons moved slowly forward. The ship slipped backward down the canal!

Slowly, scraping the sandy banks, freed from all cables, she felt her way seaward to meet the incoming tide, to float at last, triumphant, proud, once more upon the ocean's breast.

CHAPTER XII

The Pacificans Discovered

ONLY those necessary to handle the ship were to go with her, for all her available space would be needed for transporting the Chavin people. So I have no first hand knowledge of her voyage. We watched her as she moved slowly, and majestically out to sea, until only the smudge of smoke from her funnel showed above the horizon, until even that last trace of our ship had vanished.

Then, feeling a strange sensation of mingled joy and sorrow, of hopes and fears, we returned to the valley. But even if she had vanished from our sight, she had not become lost to our hearing. Our radio-telegraph men had repaired the equipment on the vessel, and one of them was on board. As she steamed slowly—feeling her way for fear of hidden rocks and reefs—towards her destination, we in the valley of Chincana were kept apprised of all that transpired. Also, we had notified those in Chavin that the ship had set sail, and the following morning they informed us that they had got into direct communication with the approaching vessel and that they were even then preparing to move to the shore to await the ship's arrival. Late that afternoon

we learned that the last man of the refugees was safe on board, but as they had seen smoke rising from an island off the coast they were planning to steam towards it, feeling sure there were persons there. In this they were not mistaken, and early the next day we received word that a settlement of nearly three hundred persons were on the island, but that it would be impossible to transport all at one time and that they had decided to return with the Chavin people and then go back for the islanders.

There is no need to go into details. The return of our ship with its passengers was perhaps the greatest event in our history since we had entered the valley, and no sooner were the refugees safe ashore than the ship steamed away to rescue those on the island. These proved to be the survivors and descendants of survivors of the city of Trujillo and other towns. They had taken refuge on the only available lofty mountain, a mere peak, which had been transformed into an island, when the surrounding plains and deserts had been swept away and flooded by the great tidal waves. Their hardships and sufferings had been terrible, and only by a miracle had any survived. For weeks they had subsisted upon dead fish, sea creatures and cactus pulp, and their only water had been what they could squeeze from cactus stalks and the little they could collect in sea-shells when it had rained. Then a dead sea-lion had been washed ashore; they had dried strips of his flesh and had lived on that, and as vegetation had sprung up, they had managed to eke out an existence.

But it was Fate or Providence that had really saved them. There were remains of ancient inhabitants on the island, and by merest chance some of the tombs were opened and were found to contain corn, beans, peanuts and other seeds that had been buried with the dead. A few of these had sprouted and grown and had formed the nucleus for crops sufficient to support the few people. But they had had no comforts, their only garments had been rudely woven from grass and fibres, and they were in pitiable state when rescued. Yet they had managed to maintain something of their old culture, their civilized habits, and they described with tear-filled eyes how like a vision from heaven the ship had appeared to them, how for a time they could not believe their eyes—for they had imagined all other human beings were destroyed—and what inexpressible joy had been theirs, when they saw that their smoke signal had been seen and the vessel was headed towards their island.

Thinking that there might be other marooned groups of people on the coasts or islands, the ship cruised back and forth for several months, but no others were found. It was on one of these voyages, when I was on board, that we made a most amazing discovery that was destined to entirely alter our lives and the lives of thousands of others, and that was in some ways the most momentous happening that had so far occurred.

As we steamed slowly along one morning and I gazed towards a distant island we were approaching, I started, stared incredulously and rubbed my eyes in utter amazement. Emerging from the shelter of the bit of land was another ship! For a moment I was sure it must be an hallucination, a mirage. It was inconceivable, impossible that another ship was afloat upon that deserted waste of ocean. But the others had seen it also. Everyone was shouting, crying out the news, and everyone was crowding to the rails, staring at the rapidly approaching ship. And as we gazed at her through our glasses, we could see that her rails were lined with men looking at us. No doubt our ship was as astonishing an apparition to them as theirs was to us. She was a much larger vessel than ours, a fine, big ship, though badly kept, rust-streaked and neglected. But we scarcely noticed such trifles. We were filled with wonder, with speculations. Whence did she come? Who were on board her? Where did they live? What was their race or nationality? Whither was she bound?

We were not long in doubt. Our radio operator had been busy, but he could get no reply from the other vessel, although he insisted he could see the rigging carrying her antenna and showing she was equipped with radio. But we were now close to the strange vessel. We were signalling to her, our signals were being answered and presently both ships were motionless and small boats were being lowered from the stranger. Filled with excitement, we peered curiously at those in her boats as they drew alongside. They were swarthy-skinned, finely-built, splendid-looking fellows, dressed in sailors' clothes, and to our further amazement they spoke to us in English, as they came swarming up the ship's side. Never shall I forget the excitement, the confusion, the chatter of tongues, the babel of questions, answers, greetings that followed.

And no wonder. Here were we, thinking ourselves the only men afloat upon the sea, representing perhaps the only surviving people in the world, suddenly meeting another ship filled with strange people, yet who spoke our ancient mother-tongue. And here were they, convinced that they alone possessed a vessel, that they alone survived, coming suddenly upon our ship, to find strangers who spoke their tongue. Never in the history of the world had there been such an epochal, such an unexpected, such a mutually amazing meeting. But gradually, as the first excitement and surprise and joy died down a bit, we began to compare notes, to relate our stories and to learn who the strangers were and all about them. Their tale was almost as strange as our own—in some respects, even stranger.

THOSE who are familiar with the history of our race in past days will no doubt recall that, some three centuries ago, the crew of a British warship mutinied and settled upon a tiny Pacific islet known as Pitcairn Island. Here, during the years that followed, they established a settlement, marrying the indigenous women of the islands, prospering and increasing, and developing a people who were noted for their honesty, their piety and their other admirable qualities, even though the nucleus of the settlement had been turbulent, Godless, murderous and ruffianly men. And the survivors of this island settlement were the brown-skinned, English-speaking fellows whom we had so strangely met there upon the deserted Pacific. At the time when the moon had gone suddenly mad, a fine big ship had been lying off the island, which was a regular port on the voyage from New Zealand to Panama.

Fortunately for all, the island was surrounded by waters of tremendous depth, so that as the sea dropped as though the earth were swallowing it up, the ship merely dropped with it and was not wrecked by striking the bottom. Also, those upon the island—being all seamen or the descendants of seamen—though as terrified by the phenomenon as we in Peru had been, realized that with the return of the water, their island would be swept bare, entirely submerged, and with one accord they rushed for the shore. Though hundreds were drowned, though scores slipped on the slimy, seaweed-covered rocks exposed by the receding waters and were dashed to pieces down the precipitous cliffs, though many never reached the shores, yet a large number (over a hundred) escaped and reached the ship, which at once headed for the open sea. Though

buffetted and tossed about and half-wrecked by the tumultuous waves, the terrific cyclones and the tempests that followed, the vessel survived. Upon her were some two hundred passengers and her complement of as many more. And it was obvious that, with the additional hundred survivors, the ship's stores would soon be exhausted, unless some inhabited spot or some bit of inhabitable land could be found.

So, for weeks, for months, the overburdened ship cruised, weathering gales, swept by great seas, her crew and passengers living in deadly terror as the mad moon went racing through the heavens, vainly searching for some familiar, known land. Constantly battered wrecks and derelicts were sighted and from some of these the steamer, at risk of sinking with all her human freight, refilled her fuel oil tanks. From others they secured necessary supplies, food and clothing, and from some they rescued ship-wrecked, hopeless, starving men and women. Yet nowhere could they find a speck of land that seemed familiar. Islands were sighted but they had been washed bare of all but solid rock by the great tidal waves. Where once the group known in the old days as the Galapagos had been were a dozen great fire-belching active volcanoes. The coast of South America had been so altered that it was unrecognizable, and navigation was a constant peril. Currents and winds had altered and reefs and rocks had risen where none had been before and land had disappeared, while no gleaming light-house remained to guide the half-mad officers upon the ship that seemed utterly lost upon that desolate altered sea.

For hundreds, thousands of miles they voyaged. The ship became encrusted with coral and barnacles, overgrown with tons of trailing weeds. Her boilers were constantly giving out, her engines continually had to be stopped for repairs, her seams leaked.

Sometimes, for days, she drifted idly while her crew labored like fiends to keep her afloat. All felt that the ship would be their tomb, that sooner or later she would founder. And then one day, when all had abandoned hope, they sighted a mass of land, a land of mountains and hills, of rolling upland meadows, of flashing streams tumbling over cliffs into the sea; a land strangely cut and carved with deep valleys or fjords where the calm sea extended for miles between the hills. Best of all, a land gloriously, richly green, not with the dense ominous jungles of the tropics, but with lush grass, with spreading trees, with flowering plants and shrubs. Carefully picking his way, the ship's captain steered his vessel into one of the great fjords and gently beached her on a shelving strip of sand between two vine-draped cliffs.

Here the thousand odd souls disembarked, and heartily weary of the sea, thinking never again to leave the fair land they had found, they stripped the vessel of everything of use or value and established a settlement in a nearby valley. They had seeds, tools, fire-arms and innumerable useful supplies. Game abounded, there were fish in the streams, and exploring parties searched in vain for other inhabitants or for dangerous wild beasts. It seemed a veritable Eden. The climate was delightful, crops were abundant, life was simple, easy, idyllic. The colony increased rapidly. Within three years it had doubled in numbers. They had schools, a church, and even the roughest members of the ship's crew become hard-working, God-fearing, law-abiding individuals under the rule of the ship's commander who had been elected president, and with the examples of the Pitcairn Islanders constantly before them. The ship's surgeon looked after their health. The ship's chaplain conducted their religious ceremonies.

Among the passengers were farmers, sheep-raisers, scientists, carpenters, mechanics, as well as millionaires, bankers, traveling salesmen and men of every walk and profession. Trades, industries, crafts, arts of all sorts flourished and were encouraged, and though their origin had been so different from ours, though every condition was so distinct, yet gradually, as the years had passed, they had evolved or perhaps better, developed, an organization, a commonwealth very like our own. From the first, religious freedom and tolerance were insisted upon, and gradually long-dormant memories of the faiths of their island ancestors made themselves felt in those of Pitcairn origin and became part of the gradually merged religions that were unconsciously amalgamated to form one universal simple creed. The commander died, and a Council of Elders and a Tribunal of Justice had been adopted.

But long before all this had taken place, important discoveries had been made. From the very moment of landing all those who gave the matter a thought had been puzzled as to what land it was. According to the ship's officers it occupied a locality that should be open sea. It was wholly a strange place that none had ever known, and the only solution seemed to be that it was a new land, a new, immense island that had risen from the sea. Yet it did not seem possible that the vegetation, the tress could have sprung up and grown, that fertile soil could have been formed in the months that had elapsed while they had cruised back and forth upon the sea. Then one day they made a surprising discovery.

Some of the ship's officers had undertaken to explore and map the coast, for despite the fact that they had found no signs of human beings upon the island, the people could not believe that such a spot could be uninhabited, and they felt sure that somewhere along the coasts, in some of the deep, sheltered fjords, there must be fellow men. So, in one of the ship's launches, fitted with a small engine as well as sails, the officers had cruised about, searching for signs of human life, exploring, mapping, thoroughly enjoying themselves. Then one day, rounding a headland, they saw a half-ruined structure upon the summit of a cliff. Instantly they recognized it as the remains of a stone and iron lighthouse. Here was a clue to the identity of the land, and having clambered with difficulty up the height, for the ruin was nearly three thousand feet above the shore, they learned the truth.

There could be no doubt of it. The officers had been familiar enough with the lighthouses of the Pacific coasts to feel positive of the identity of the ruin. It was Cape Pillar, the beacon that, years before, had guided mariners to the entrance to Magellan Straits! The men gazed at one another in mutual wonder. Cape Pillar! Then this land, this lovely, balmy land was Patagonia or—they cast appraising eyes at the sun—yes, that was it. The ruins of the battered storm-swept lighthouse was on the northwestern extremity of the land. It was not Patagonia. No, Patagonia had vanished. It was all open, boundless sea in that direction, a waste of waters broken only by small, barren, upjutting rocky islets and forbidding submerged peaks—all that remained of what were once mountains—and this land, this earthly Eden, was therefore the archipelago that once had extended southward from the Straits of Magellan to the Antarctic Ocean!

AS if this were not enough, the next day the explorers made a second discovery. Rounding a point of the land, they came in view of a long, steeply shelving beach and there, above reach of the waves, half-hidden in a grove of oak and cedar trees, was a village. Smoke

rose in thin blue spirals from bark-roofed houses; canoes were drawn up upon the shore, and men and women, dressed in the skins of animals and birds, were staring at the strangers as if at ghosts. They showed no hostility; rather, they seemed in terror of the white men, who, having more than once sailed through the Straits, recognized the natives instantly as Patagonians. Not the dwarfed, degenerate, miserable creatures then known as Alekaluts nor the slightly better Yaghans or Onas, but as members of that larger, more powerful and more intelligent people called, in those days, Tuelches.

Filled with news of their discoveries, and accompanied by the Tuelches, the officers hurried back to the settlement. All listened to their story with interest and amazement. Now they knew where they were, what land they were on, and this knowledge explained many matters that hitherto had been mysteries. It explained why there was barely a forty-foot rise and fall of the tide. It explained why the vegetation was that of the temperate zone. It explained the deep fjords, the oak groves, the pine and cedar forests. It explained the entire absence of large or dangerous wild beasts, and it explained the almost entire absence of human beings. But it did not explain to the commander of the ship nor to his officers, how they had made such a mistake in their calculations and position.

But the finding of the Tuelches alive and well upon this remote southern land brought hopes to the settlers. If these simple, uncivilized beings had survived the terrible disaster to the world, was it not possible, even probable, that others—civilized men far better equipped mentally and in other ways—might have escaped, might even be living comparatively near? The more the people thought on the matter, the more they became convinced that such might be the case. But how could they know; how could they find them; how could they get in touch with them?

Some suggested that the ship should be cleaned, repaired and should set out on a systematic search. But the officers would not listen to this. It would be a terrific undertaking to put the ship in seaworthy shape and, they reminded the others, during the many months they had been constantly at sea, they had not only failed to find any indications of living people, but had failed as completely even to find land where people might dwell.

But others, and among them a college professor, argued that that proved nothing. He pointed out that the coasts of the continents, where sighted, had been only low mud-flats incapable of sustaining life, but that in the far distance there had been mountains that might be inhabited. He reminded the others that if this southern archipelago had been raised by the cataclysm—in all probability by the earthquake—other portions of the world might have been uplifted without injuring their inhabitants, and he declared positively that he believed that many towns, cities and settlements that had been on the higher lands might have escaped. Still he could suggest no means, or at least no feasible means, of reaching them or of discovering the truth.

It remained for a mere boy to do this. He was the junior radio-telegraph operator of the ship. The senior operator had died at sea. He remembered that many of the radio stations had been situated on high land, even on lofty mountains; that there was no reason why they should have been injured, and that there was a chance—a darned good chance—as he put it, that he might be able to rig up a station by which he could communicate with some of them. And when, after endless trials, after hours, days, sending out calls and listening for replies, he caught a fragment of a message, excitement ran riot.

But he could hear only a fragment. Not enough to learn anything, not enough to aid him in fixing the direction or the distance of the station. For months he worked, testing, improving, trying new ideas in his mad desire to hear more, to learn who these mysterious survivors were, where they were located. And at last he triumphed. To be sure he could not send a message that brought any response or acknowledgment, but he received enough to settle all questions. He had overheard us communicating with the Chavins. He had caught but one word that meant anything—"Chavin"—and it was not difficult to locate that spot by means of the ship's charts. And now that there was no doubt of human beings being there, even the ship's officers were in a fever to recondition their vessel and to set forth in search of the distant community, who, from the fragments of conversation picked up, were obviously in dire need of help.

Their undertaking was nothing compared to what we had faced. Their ship had not been wrecked, had not been driven high and dry and left stranded by a terrific tidal wave. It had been purposely beached. It had been moored securely by cables to the cliffs, and although it was not in good shape, it required comparatively minor repairs and replacements. Moreover, the ship's crew, its engineering force, everybody, was available to conduct and carry on the necessary work. Hence it proceeded far more rapidly than did ours. Their ship was ready for sea soon after our vessel had been launched.

But they knew nothing of our plans, knew nothing of the Chavin people having been rescued, for the radio operator had come to a sad and terrible end. In stretching the wires for the antenna between the ship's masts, he had fallen and had been instantly killed. And as there was no other to take his place, those upon the ship failed to learn of our proximity as they steamed northward, and neither could they receive nor reply to the messages we sent out as we sighted them.

But even if they had failed to rescue those at Chavin, they had accomplished more than they had expected. They had met us; they had learned of our big prosperous, thriving community and they gladly accepted our invitation to visit us. It is needless to describe the enthusiastic reception they received, needless to dwell upon the interest with which we heard of their land, of their accomplishments; needless to try to describe their interest and their wonder at what they saw in our valley. The great, docile colossadons filled them with awe and astonishment beyond words; our farms, our city, our entire community excited wonder and admiration; but most of all were they amazed, fascinated, at our statements in regard to the Trees of Life. Of course they were incredulous. They could not believe the powers of the nuts possible. But old Padre Antonio told them of his test and laughingly informed them that as he was now well over one hundred years of age, and as strong as ever, he was perfectly satisfied. Also, we pointed out that, as no member of the community had died a natural death since partaking of the seeds, and as the Inca was, according to his statements which no one doubted, approaching his second century mark, the visitors were at last convinced. In fact, they were so far convinced that all partook of the preserved nuts, and we presented them with enough to supply every member of their community.

Naturally we were as anxious to visit their settlement as they had been to visit us, and though it was questionable if the tropical creatures would survive in a temperate climate, we carried two pairs of the colos-

sadons with us when we set sail for their distant home. To that visit it is not necessary to devote more than a few lines. We were delighted with the spot. We found the people most charming, and our colossadons and Life Tree nuts filled them with the most unbounded amazement. And we were mutually astonished to discover how similarly the two colonies had progressed; how alike were our laws, our religion, our organizations. Also, we of Chincana were all greatly impressed by the superior advantages these people possessed. They had no ever-encroaching jungles to fight; no danger of attacks by savage beasts or men; no noxious vermin nor insects. Their climate was balmy, equable, invigorating, instead of enervating, humid and hot. They could cultivate wheat, grains, vegetables and fruits of the temperate zone impossible for us, and whereas we were confined to a single valley surrounded by impenetrable forests and jungles, they possessed a vast, beautiful country capable of supporting millions. Fond as we had become of our Andean valley, though it had become our home and we hated even to think of deserting it, yet we realized its disadvantages, and when urged to migrate to this land, which they called Pacifica, we were greatly tempted to do so.

But we few, who had voyaged southward on this visit, could not decide for the thousands at home. It would have to be determined by popular vote. If the majority were for the migration, then we would undertake it. But even if we did not move to join these newly discovered friends, we no longer would be cut off, isolated, alone. We could travel back and forth; we could visit. Our people could intermarry. We could join to form one nation, one commonwealth. We could exchange commodities, and we felt at last as if we had near neighbors. And even when apart, we could still keep in touch with one another, for our radio operators had busied themselves installing a station in Pacifica that could communicate with us, and one of the men volunteered to remain—partly, no doubt because of a charming girl he had met there—and take charge of the station.

So, having passed a glorious time, and laden with gifts of foods and other things that we had never before possessed, we bade the Pacificans farewell and steamed northward towards our Andean home.

CHAPTER XIII

The Menace from the Moon

IF it had not been for the Moon Children, we might never have left the Valley of Chincana and the entire subsequent history of our race would have been different.

When, upon our return from Pacifica, we told of all we had seen, and when we described the land and pointed out its advantages over our valley, everyone was deeply interested, but the popular sentiment was all against migrating to the home of our newly found friends. Chincana was our home, our land. Here were all our interests, our ties, our associations, the fruits of our years of labor, efforts and struggles. Many of our people had been born here, had known no other home, and we could not dream of deserting our flourishing farms, our comfortable houses, our fair city and all we had produced and established through many years. Moreover, this was the native land of the Inca and his people and of their ancestors through countless centuries, and the admixture of Incan blood had brought with it an intensely patriotic feeling in the hearts of the younger members of the community. Still a few, about five hundred in all, wished to go to Pacifica. Mainly these were those who had come from Chavin and other districts, and as it had been announced that all who so desired were free to go and would be carried to the southern land, they embarked upon our ship and sailed away.

But as I say, if it had not been for the coming of the Moon Children, we others, no doubt, would have remained forever in Chincana. We called them the Moon Children, yet even now we do not know positively if they came from the moon. Even if they did not, still they were a result of the moon's having run wild, and as no one has offered a better theory than that they were of lunar origin, the name seems appropriate enough. Neither did anyone know when they first appeared or where or how they came. To be sure, one of the astronomers reported that he had seen a strange mist or vapor rising above one of the continental masses on the moon, and later this phenomenon was associated with the arrival of the Moon Children. But for all we actually know, it might have been a column of steam and smoke arising from some great lunar volcano in eruption, or for that matter a particularly heavy cloud, gathered about some mountain top on the moon. All we really know is that they came, like the little brown men, and the great man-eating reptile, the colossadons and the winged monsters of Chavin, suddenly and without warning; that they appeared as if by magic from nowhere; that they were the terrible, the most horribly gruesome and uncanny enemies the human race has ever faced. Possibly they had always been on earth—elusive, ghostly, timid things hiding from the light in some remote jungle or mountain defile—to become bolder as their numbers increased and they grew larger and more strenuous under the new conditions of things. Or again, for all I or anyone else knows to the contrary, they may have been evolved—produced—by Nature from the humid fetid air of the vast pestilential swamps and marshes, the steaming jungles and the rotting vegetation as so many strange, weird, bizarre and often repugnant and horrible forms of life and vegetation were spawned. No one knows, it is all guesswork, supposition, and one theory is as good as the next.

To us in Chincana they appeared in a night soon after that column of pale vapor had been seen ascending from the surface of the moon, the surface that, prior to the new order of things, had never been seen by human eyes, and the theory has been held by many scientists that it was because of this that they came to earth, or rather that they had not come ages before. That, not until the moon altered its position so as to bring the earth into view from that hidden side, did those upon its surface learn of the existence of our planet and that with the changes upon the moon that were the result of our satellite's mad behavior it became untenable to the beings who then sought refuge upon our sphere. Possibly these savants may be right. I am not one to deny, contradict nor support them, for I know only what I saw and experienced in that dread and terrible time, and to me and to the others of Chincana the beings seemed more likely to have been spewed from hell than from the moon.

They came, as I say, at night. Who was the first to see them I cannot say, but probably many saw them at about the same time, for they arrived in numbers. Like myself, those who first noticed them gave the things little thought, for we had become so accustomed to constantly meeting new and unknown forms of life, that we paid no heed to any that did not appear dangerous or savage or did not threaten to injure our crops. And these things, as I first saw them, gave no impression of danger or harmfulness. I saw them first hovering above the trees at the edge of the forest. Al-

though the moon had sunk below the horizon in the west, yet a faint glowing light suffused the valley, and the mountains, the trees, all solid objects, stood out in black silhouette. And above the dark mass of forest, mysterious and ominous in the soft moonlight, was a faintly luminous, intangible wisp, that might have been a bit of fog or mist rising from the damp coolness of the jungles, as it often does after the sun goes down. Yet this particular bit of vapor appeared to move and sway and rise and fall and gyrate in a most remarkable manner, so that my attention was attracted to it.

Approaching more closely and peering at it more intently, I was surprised to discover that it was not mist nor fog at all, but a cloud of pale, colorless, almost transparent, exceedingly frail-looking creatures like overgrown May-flies. And like those short-lived, evanescent, phantasmal insects, these equally ghostly-appearing creatures were hovering, flitting about, gyrating as if dancing in air to some inaudible rhythm. I could not distinguish their individual forms, for they moved rapidly in a blurred swarm, exactly as do the tiny insects I have mentioned, and the impression I received was precisely that of looking at a swarm of May-flies through a powerful lens.

I was not even sure how they moved, whether or not they possessed wings, though I took it for granted that they did, nor could I be at all certain of the forms of their bodies which were so pale, transparent and wraith-like, that they appeared formless in that faint, deceptive light.

But at the time I did not really endeavor to study them with any great care, but watched them for a few moments in rather cursory curiosity, deeming them a new species of giant insect and wondering, half consciously, why Nature had created creatures like May-flies and these phantasmal things to exist as sluggish larvæ in the beds of streams for months or even years, and then, when they had burst their pupal bonds and with fairy-like wings, had come forth into the open; why their freedom should endure for only a few hours and they should perish miserably between darkness and dawn.

Wondering also if these giant insects—for I judged them to be several feet in length—would lie dead, bedraggled, insensate things when the sun again rose or if because of their greater size they were granted a longer span of life than their tiny relatives, I turned and resumed my way towards my home.

I HAD gone perhaps a quarter of a mile, when I had a strange sensation of being followed, of some impending danger near me. I am not a nervous man nor am I easily frightened, and I had faced perils far too many times to be terrified by any known danger threatening me. Yet, when I turned and glanced back to see if by chance some wild beast might be near, and saw nothing, a cold chill ran up and down my spine. I had a queer, uncomfortable tingling of my scalp, and a wave of unreasoning, half-superstitious terror swept over me. With an effort I threw it off. There were houses near—their lights gleamed brightly through the trees—and it had been months, yes, years, since savage men or beasts had visited the valley. Then once more that strange, inexplicable feeling of something uncanny, ghostly, swept over me, and at the same instant I seemed to hear a soft, almost inaudible sound from the air above my head, a sound like a low sigh or a deep, indrawn breath. The blood seemed to freeze in my brains, as glancing fearfully upwards, I saw a faintly luminous form, an indescribable something, hovering over me!

Trembling in every limb, my skin prickly with goose-flesh, I stared at the thing, the thing that seemed more like a bit of cloud than a reality; the thing through whose indistinct, transparent form I could see the stars in the distant sky. And then suddenly, as realization dawned upon me, I laughed loudly, hoarsely, almost hysterically. The thing that had caused me such terror, that had filled me with such nameless fear, was merely one of those huge May-fly-like insects I had seen dancing above the forest! It might be huge for an insect, but it was harmless. Even if it possessed the habits of a mosquito rather than of a May-fly I could not for a moment picture that frail, transparent, weak thing harming anybody. The least blow, a touch—even a gust of wind—would destroy it. It was the frailest of all living creatures, almost nothingness endowed with a tiny spark of evanescent life.

Lifting my stick, I struck at the thing, and though it was beyond reach and the blow missed it by fully two feet, yet it was so fragile, so weak that the slight gust of air produced by the movement of the stick caused it to flutter, to sway perilously, and it veered off and vanished in the dim light. Smiling to myself at my unwarranted fears, and wondering if I were becoming nervous, I continued on my way, to come to an abrupt halt, to listen with straining ears, to once more feel that strange, unaccountable sensation of fear, fear of something uncanny, supernatural, the fear that as a small child I had felt when I had listened to ghost stories. From somewhere to the right, in the direction of the nearest house, had come a terrified bellow that had ended abruptly in a low, choking moan. For a brief instant I stood there, trembling, filled with horror at the sound. Then, forgetting my own fears as I saw lights flash and heard faint shouts from the place, I leaped forward and ran at top speed towards it.

As I neared the house, where excited voices were calling to one another and figures were outlined in the beam of light from the open doorway, I passed close to the corral, and as I rushed by I gasped, half-halted in my stride. Within a few yards of me a faintly visible, mist-like thing had risen swiftly from within the corral walls, to be followed by a second, a third, a dozen ghostly things that seemed to blend and merge together into a swirling, drifting column of luminosity that vanished like smoke.

Unreasoning terror filled me. My hair seemed actually on end. What did it mean? What were these strange, almost invisible creatures? What were they doing here? And that terrified bellow, that agonized groan? What had happened? What or who had been injured, and by what? All these unanswerable questions raced through my mind as I covered the last few yards and came to a halt beside the puzzled frightened inmates of the house. But they were as much at a loss as I was. They had heard that same short, startling bellow—the cry of some animal in mortal terror or pain—and seizing weapons they had dashed out, thinking that some savage beast was near. But all had been quiet. Nothing seemed amiss.

"The corral!" I panted, striving to regain my composure and my breath. "Have you looked in the corral?"

Seizing lights, we hurried to the stone-walled enclosure where the cattle were kept The herd was close-packed, crowding against the further wall, their eyes rolling wildly, their horns tossing, their mouths slobbering foam. Something had filled them with mad terror, and even our presence and the lights failed to reassure them. Opening the gate, we peered about. For a moment we saw nothing unusual. Then, in one corner, we saw a dark mass upon the ground, and with ready weapons, not knowing what to expect, we stepped cautiously forward. Upon the earth lay the carcass of

a large bull. I say carcass, but the creature was not dead. Rather, he seemed paralyzed. His eyes, rolled upward until only the whites showed, blinked in the glare of our lights, his ears twitched convulsively, breath came in gasps from his distended nostrils. Yet he was powerless to move. A cry of horror came from the lips of the man beside me. I swung about and stared speechless at the body of the beast at which he was pointing. It was sunken, emaciated, and the skin hung in loose, horrible wrinkles and folds. It was as if a hide had been tossed over a skeleton, and everywhere, over the neck, the flank and the shoulders were dozens of round gaping holes as if the creature had been riddled by bullets! We stared at one another with questioning, frightened eyes.

What terrible thing had happened? What fearful thing had inflicted these wounds upon the bull.

And as I thought of those dim, phantasmal, wraith-like things that had drifted upward from the corral, my teeth chattered, numbing, chilling terror gripped me, and a cry, half-groan, half insane fear, issued from my bloodless lips. The man beside me seized me by the shoulder, shook me, hurled questions at me, but I could not speak coherently. I could think only of those ghostly, mysterious forms I had seen dancing above the trees, of my sensations when that indistinct, transparent, visionary thing had hovered over me, of the ascending swarm of silent, phantom-like things that had risen from the corral—yes from the precise spot where we now stood gazing at the shrunken body of the bull, which one of the men had mercifully put out of its misery.

In vain I tried to narrate what I had seen, to express my fears, my vague, half-formed premonitions. Despite my every effort, my eyes gazed wildly, fearfully at the air about and above us, until, still jibbering like the idiot to which my horror had temporarily transformed me, I turned and dashed madly to the house with the others beside me. My fear, even if inexplicable to the others, had been contagious, and together we sprang through the door and slammed it shut and bolted it behind us.

ONCE safely within the house, and with bright light on every side, our terror vanished, and though still shaken and nervous, I told in as few words as possible, what I had seen, and declared that I was positive that these new, uncanny, apparently harmless creatures had attacked the bull and—like vampires—had sucked the creature's blood. Horror filled their eyes as they listened to my words. It seemed incredible, too terrible for belief that such things could exist, that such ghostly, winged, bloodthirsty beings could be infesting the valley. Yet we had seen so many strange incredible happenings, so many repulsively horrible beasts and men, that even the most incredulous of men were prepared to believe almost anything. Moreover, my story received confirmation from the wife of the owner of the house. She had remained with her children indoors while we had visited the corral, and she had listened to my narrative with wide, frightened eyes. Then, as my story was ended, she told us how, that same evening, she, too, had seen the ghostly beings. She had glanced out of one of the windows and had seen what she mistook for a wisp of vapor hovering over the trees beyond the gardens and corral. Low-lying clouds or masses of vapor were not at all unusual in the valley, especially after sundown, and she would have given this no further thought had it not been that—just as I had observed—this bit of mist had appeared to move, to twist and to sway about with definite and rhythmic movements. Wondering if it was due to the effect of looking through glass, she had stepped to the door, but by the time she had reached it and looked out, the things had vanished. She had forgotten all about the incident, until she had heard my account, but now it was evident to all that she, too, had seen either the same swarm, or, worse yet, another swarm of the terrible, uncannily horrible things, that, we were now convinced, were the most deadly menace that had ever confronted us. Already, for all we knew, the things might have destroyed innumerable lives—human beings as well as dumb beasts, and everyone must be warned, must be on his guard. No human beings could safely venture from their homes at night until we knew more of this new terror, and orders and warnings must be sent instantly to every inhabitant.

Luckily that would not be difficult, for although I believe I have neglected to mention the fact, for a long time—ever since our victory over the Misguided Ones or a little later—we had been equipped with a means of communication known in the old days as the telephone. This was, as perhaps some antiquarians know, an electrical device by means of which a person could talk with another at a great distance. It was a simple affair, and our radio-telegraph operators, with assistants and mechanics, had made and installed the instruments which were obligatory in every home. Of course, compared to our modern vocagraph by means of which we not only communicate but are able permanently to record messages and conversations when desired, the old-fashioned telephone was a crude, clumsy affair. But it proved of the utmost value to us of Chincana, and at a moment's notice any news, any instructions, any warnings, or in fact any important communication could be transmitted to every house in the entire valley and city at the same instant, merely by the chief operator in the head or central office being instructed to broadcast the message.

So, within a few moments from the time when I had told of my experiences, every inhabitant of the valley, every resident in the city, had received a brief account of the matter and had been warned—I might say commanded, though commands in their literal sense were never given nor required—to remain indoors until morning, no matter what happened; to keep all windows and doors closed, and not to venture forth the next day until they received word that it was safe to do so. And all were asked to immediately report any strange or inexplicable occurrence that had taken place or that took place, any information regarding the ghostly visitors we had seen, or anything whatsoever that might throw light on the subject.

The reports more than confirmed our worst fears. Hundreds of people told of having seen the things, though none had considered them more than mist clouds or unusual swarms of unknown insects. Scores reported having experienced the same chilling, nameless dread I had felt when they had been abroad that night. Several told of having heard commotions among flocks, but luckily they had been too nervous to investigate, and three individuals told of being followed by the things, though they had not been attacked. But most ominous of all was the fact that no replies were made to many calls and that numbers of families reported members missing.

That night was a terrible ordeal for everyone. Unable to sleep with the thought of those ghastly, mysterious, almost intangible beings in the vicinity, we sat and waited through the long hours for dawn. Twice more we heard the blood-curdling cries of cattle and knew what horrible revolting scenes were taking place in the corral, and from time to time we received word of similar tragedies being enacted elsewhere.

But gray dawn came at last. The sun rose above the mountains, and as the valley became flooded with sunlight and birds sang and the world once more came to life and the terrors of darkness fled, we searched the valley, the distant jungles, the air, for signs of the ghostly, blood-thirsty visitants of the night. But there was no sign of them, and as reports from every section were the same, we decided that the danger, for the present at least, was over, and notified all persons that they might venture out from the security of their homes.

CHAPTER XIV

Open Fire

IN the clear light of day, with the sun shining brightly, with the droning of bees, the chirping of insects, the songs of birds, the lowing of cattle and the laughter of children all about us, it seemed as if the events of the night must have been a nightmare and not reality. But the mute, horrible evidences within the corral proved only too plainly that it had been no dream. Four bloodless, ghastly carcasses were stretched upon the ground, and every one bore those ominous round holes through which the life blood of the slain cattle had been sucked by the gruesome, mysterious, uncanny things of the darkness. Very soon reports began to come in from afar and near. Everywhere cattle, sheep and other domestic animals had met the same fate. Even three of the gigantic colossadons had fallen victims to the misty vampires. But worse was to come. Before the morning was half over, more than a dozen human beings had been found—bloodless bundles of skin and bones—beside roadways or paths where they had been pounced upon by the horrible creatures, whatever they might be, and in each case the jugular veins had been punctured.

But worse than the horror of the tragedies, worse than the loss of life was the fact that we were so helpless in the face of this new menace, that we had no means of combating the ghastly creatures. To be sure, with care, the loss of human life might be minimized, if not entirely obviated, by the people remaining indoors with closed windows and doors after sundown. But that would not protect our live stock nor would it solve the problem nor destroy our bloodthirsty foes. And to cower within doors through the long nights, while our herds were decimated and their agonized cries rang out in our ears, to live with the knowledge that somewhere, close at hand, the indescribably horrible things were hiding, waiting only for nightfall to come silently forth, to dance like disembodied spirits above the trees, to drift down and suck the blood from any living thing they could find, would drive everyone to nervous breakdown, if not to insanity. Such conditions would absolutely destroy our morale. In fact, this one night had resulted in panic. And had our ship been within reach, there would have been a stampede to board her and sail away from our accursed valley and seek refuge in far off Pacifica. Already we had communicated with the people there, had apprised them of what had happened, and had asked if they, too, had suffered. But they had seen nothing of the Moon Children, as they were later called. Also, we learned our ship had arrived safely and had left on its return voyage, and they offered to despatch their own ship at once to aid us in deserting the valley, if we decided to do so. But even if, driven frantic, hopeless, by this new curse, we had decided to leave Chincana, it would have been impossible to do so for days to come. Our own vessel would not return for at least eight or ten days, and we shuddered to think of what might happen in those eight or ten days.

No one seemed able to suggest any reasonably feasible plan for fighting or destroying the horrible creatures. Yet destroy them we must if we were to survive. We knew nothing of their habits.. We could not guess their numbers. And though I am loath to admit it, we were superstitious enough to fear that fire-arms, weapons, any means at our disposal, would be powerless to destroy the things which seemed unearthly, like beings from another universe, another planet. It was that thought that first led us to the belief that they came from the moon. All our troubles had come from the moon, and these creatures—if creatures they could be called—were like wisps of moonlight, as vague and ghostly, as intangible. And the manner in which they shunned the light of day and appeared at night to dance and cavort and suck the blood of those they killed in the moonlight, all savored of inhabitants of that mad planet.

But if they came from the moon, it only made matters worse, or so it seemed to our distraught minds. Earthly things we might deal with. But how could we of earth deal with these things from another sphere? And if they came from the moon, how could we ever hope to check them, to destroy them? These hordes that already beset us might be merely advance guards, scouts, so to say, who would be followed by thousands, millions of the terrible things, by dense swarms to whom mankind could only succumb, and could only be wiped from the face of the earth.

All these fears, these problems beset us, as we met and discussed and suggested and tried to formulate plans. Yet ever recurred the question: What becomes of the things during the day; where do they hide away? Somehow, though I cannot explain why, that seemed the crucial point. Probably because we humans are creatures of daylight we felt that if we could face our enemies during the hours of sunlight we could accomplish something. The most careful search failed to disclose a sign of their presence. We even tethered cattle in the shelter of the forests, hoping we might tempt the things forth, but in vain. And meanwhile time was passing, night would come once again, and we were still no nearer a solution.

All we could decide upon was to keep everyone within doors except a patrol of volunteers, who, armed with firearms, were to test the efficacy of their weapons upon the vampirish things if they appeared—as we felt sure they would. Looking back upon it now, I realize what inexpressibly brave men those fellows must have been to have volunteered to face the mysterious, perhaps unearthly beings, alone at night. Yet there were others, whose courage was perhaps even greater. These were the aviators. We had secured some additional fuel from the ship of the Pacificans, and the two heroic men offered to fly about the valley during the night and to rush at—to dash into—any of the phantasmal creatures they saw. I shuddered at the mere thought! I felt absolutely nauseated at thought of dashing into a swarm of the things, not knowing what might happen. They might surround the airplane, might overpower the aviators and drain them of their blood as their airship came crashing, unguided, to earth. Or the things might be enraged to a point where they would develop far more terrible habits than we dreamed they possessed. And even if the creatures were killed, hurled aside, cut to bits by the rushing machine and its whirling propeller, the sensation of ploughing through them, of being surrounded by them, was enough to make one shudder with horror.

But the two aviators were not men who possessed nerves, nor who knew the meaning of superstition.

Veering suddenly, swiftly rising, the plane dashed, with a deafening roar, above our heads, straight at the column of misty ephemeral things.

There wasn't anything alive that could stand up before their hurtling airplane and survive, they declared, and these things, as described, were miserable, fragile, ridiculous beasts, that would be ground to bits, knocked right and left, utterly destroyed by the mere wind made by the machine. Hadn't I said that the slight swish of my stick had almost upset one of the creatures? Yes, they insisted, they might be beastly, they might suck blood, they might come from the moon for all they cared, but, in their opinions, they were just some sort of giant mosquitoes and no more to be dreaded.

So, as the sun sank towards the west, final arrangements were made. The people were instructed to stay shut within their homes as dusk set in, and the volunteers looked to their weapons and started off, while the two aviators filled their fuel tanks, went over every portion of their machine and started the motor preparatory to their courageous—I might say madly courageous—adventure.

IT had been agreed that the men should go in couples, partly for greater safety, but largely because no man cared to wander alone at night with such creatures as the Moon Children in the neighborhood. My companion was a young fellow named Jameson, for I had also volunteered—not that I was any more courageous than others—but because I was not only anxious to be present if the things appeared and were attacked, but also because, having seen the horrible creatures—whereas many of the others had not—I felt that my services might be of some value.

We set out, sixty-seven men, all told, just after sundown, and started for our various posts, it having been arranged that each pair of men should cover a definite section of the valley, patrolling those portions nearest the largest herds of cattle and the most houses, and especially where the horrible things had been seen or had committed their ghastly depredations on the preceding night.

For my part I had selected the neighborhood where I had first seen the things and near the house wherein I had spent that terrible night. Yet, as we walked along and the great copper moon rode high in the sky, the whole affair seemed most unreal and dreamlike. Everything was so peaceful, so calm, so seemingly safe and secure. In the soft glow every object stood sharply forth. Trees, bushes, distant houses; every leaf, every blade of grass seemed damascened in gold upon a background of of blue-gray steel, and in the purple dome of the sky, faint pin-points of light shone like diamond dust. Overhead the last home-bound parrots winged their way with harsh cries softened by the distance, crickets chirped in the roadside weeds, frogs trilled, and birds settling to rest in the thickets uttered querulous, plaintive notes.

From the forest came the countless, mysterious inexplicable sounds of the jungle: booming of tree frogs, the scream of some creature of the cat kind, protesting squawks of macaws and parrots, as some new arrival disputed the rights to roosting-places, the soft hooting of an owl, the howling of monkeys, the crash of some falling, rotten limb, the droning chorus of myriads of insects. That horrible, vampirish, phantasmal beings such as had cursed the valley could lie hiding, watching and waiting for darkness, amid such surroundings seemed incredible. Yet we knew it must be so, and with tense nerves, speaking little, keeping close together, we moved about, glancing here and there as the moon swept across the arch of sky and dropped towards the dark forest to the west. Slowly the light faded, the shadows lengthened and blurred, the stars blazed brilliantly in the velvet sky; in distant houses lights twinkled, and I felt a twinge of that unreasonable, immeasurably ancient terror of darkness, that is the heritage of man from his cave-dwelling ancestors in the dawn of the earth's history. Yet all was quiet, calm, redolent of peace, of security. No shouts, no shots, no sounds of alarm came from the distant patrols who, we knew, were, like ourselves, pacing back and forth, straining ears and eyes for the first sign of some unusual sound, some unusual sight. We had reached almost the precise spot where I had first noticed the mist-like swarm of things the previous evening.

I glanced at the forest, seized Jameson's arm and

pointed with shaking finger! There, just as I had seen them before, were the wraith-like forms, gyrating, dancing above the tree-tops. That those frail things could be so deadly, that they could do harm to any living thing, seemed preposterous. They were more beautiful than evil; sprites, fairies moving in an elfin dance of joyous freedom. Yet even while such thoughts came to me, horror of the things froze the very marrow in my bones as I pointed silently at the swaying swarm.

I felt rather than saw Jameson shudder. Then—"They—they don't look dangerous," he whispered. "They don't—don't even look alive, real. They—" despite himself his voice was unsteady—"they—they look like—like ghosts!" With a tremendous effort I steadied myself, controlled my voice. "Yes," I whispered. "I know. But they *are* real, they *are* alive. They *are* dangerous; deadly, terrible!"

As I spoke, I cocked my rifle, determined to learn if the phantasmal things would die like mortal creatures or if—— I raised my gun to my shoulder, aiming at the thickest portion of the moving horde, and from the corner of my eye I saw Jameson was doing likewise. The two reports roared out like one. I saw the misty column of forms sway, reel, swing back and forth, and then once more its rhythmic motions continued as before. Not one of the confused, intermingling figures had dropped to earth, nothing had happened! I stared at Jameson and he gazed, wide-eyed, at me. Our bullets had had no effect, the things were—— The distant roar of the airplane interrupted our unspoken thoughts. The waiting aviators had heard our shots; they knew we had found the things; they were rushing to the attack. A minute later the oncoming machine appeared, flying low, sweeping towards us like a gigantic black night bird. We shouted, waved our hats, pointed towards the things still dancing above the forest, clear, luminous against the dark sky.

Perhaps the two in the plane had already seen them; perhaps our gestures revealed the things to them. But there was no doubt the occupants of the machine saw the creatures now. Veering suddenly, swiftly rising, the plane dashed, with a deafening roar, above our heads, straight at the column of misty, ephemeral things. For the fraction of a second the swarm was hidden by the vast black bulk of the machine. There was a faint, softly sucking noise—such a sound as one makes when walking in thick mud—for a brief moment the plane seemed to slow down. Then, with redoubled speed, it rose steeply upward, banked sharply, and came swooping to a landing within a few rods of where we stood. But our eyes were glued to the spot where the dancing figures had been. They had vanished, not a trace of them remained.

TURNING, we rushed towards the motionless plane. But as we came near it, we halted, coughing, nauseated, by the overpowering, horrible odor that met us. Nothing can describe it. Yet horrible as was the smell that outraged our nostrils, it was hardly noticed in view of what we saw. Everywhere upon the airplane—clinging to the propeller, adhering to the motors, hanging from wires and struts, draping the wings and body—were strips, ribbons, fragments of livid, greenish-white membrane, like rotten tripe and horrible, translucent, jelly-like blobs like—as Jameson afterwards expressed it—like masses of frogs' eggs. And, like frogs' eggs on a gigantic scale, these quivering gobs of jelly each contained a dark, central nucleus the size of pigeons' eggs.

The two aviators stumbled from the machine, staggered like drunken men for a few yards and threw themselves upon the ground.

"Lord, it was horrible!" one gasped. "It was like driving through—through jelly! And their eyes! God, will I ever forget it!"

"And the stench!" the other exclaimed and spat. "It was so thick you might have cut it!"

"But what were they like?" I asked. "What——" My question was never finished. With a hair-raising scream Jameson leaped to one side. Instinctively I sprang back, tripped, fell sprawling. A faint humming, no, a purring sound, drew my eyes upward, and horror unutterable, beyond words to express, paralyzed me. Dropping towards us with incredible speed were two of the terrible things. Like decomposed fish they seemed to glow with a faint phosphorescence. About their shapeless, gelatinous bodies was a faint shimmering halo—like the rapidly moving spokes of a wheel. But I scarcely saw these details. My senses were fixed, rivetted upon their eyes! Eyes! Dozens, scores of baleful, unblinking, inexpressibly cold and cruel orbs, that glowed like coals of green fire within rounded masses of transparent jelly! They seemed to hypnotize me, to render me devoid of speech, of motion. An instant more and they would be upon me, at my throat, puncturing my jugular vein. I tried to shrink away, to cower back, to scream. I was gripped, locked in that awful, numbing helplessness that one experiences in some terrible nightmare. And then, as the things seemed upon me, as I saw with insane terror long wavering fingers reaching towards me, I was deafened by a double crashing roar, blinded by flashes of flame beside my head. As though hurled upward by a spring, the two things shot into air, they reeled, rocked like tiny boats in a tempest, and then, slowly righting themselves, vanished in the dusk, leaving behind them a whiff of such overpowering horrible odor that I was overcome with nausea.

Dimly I heard one of the aviators speaking. "The—they're not mortal!" he gasped. "I'll swear I put two bullets square through the things and——" "Rot!" exclaimed the other. "Didn't we kill 'em with the plane? They're mortal all right, only they're so darned pulpy, bullets don't kill 'em. But they hurt 'em all right. Did you see the way they jumped! And it scared 'em off too. I——"

The distant reports of gunfire interrupted his words. We sprang to our feet. Somewhere across the valley others of the patrol had sighted the things, had fired upon them. The aviators dashed for their machine. "Come on!" one yelled. "They're over there—to the north! Now we'll make hash of 'em!"

Scarcely knowing what we did, forgetting that our duties were to patrol the neighborhood, Jameson and I clambered into the machine. Too excited even to notice the horrible odor (though actually it had by now almost disappeared) unmindful of the grisly fragments of gelatinous and membranous bodies about us, we thought only of flying to the attack, of annihilating the fearful things that even now might be sucking the life blood of our distant comrades.

With a roar the motor sprang into life. For a moment we jolted, bumped over the rough ground, and then, like a great, broad-winged bird, we rose and went rushing through the night. Below, among the trees, lights of houses showed like tiny sparks, and far ahead, dim intermittent flashes showed where the patrol was still firing—firing impotently as we knew—at the ghostly terrible vampires. Almost before I realized it we were upon them, and peering ahead I saw a dim, indistinct, mistly column—a vast horde of the beings. Instinctively I cowered back, shut my eyes. I felt the speed of the plane decrease, I heard strange, dull, thudding impacts against the body and wings of the machine. I opened

my eyes. We seemed enveloped in almost solid matter in—yes that was it—in thick jelly. And the stench—that awful odor that was like a mixture of dead fish, of carrion, of acid fumes, of burning brimstone and of all known malodorous things on earth, seemed thick enough, heavy enough to be tangible and visible. It was all over in an instant. With a sudden acceleration of speed, the plane was again in clear air. But the pilot was not yet through. Wheeling the machine until it seemed to stand upon one wing-tip, he headed back at the scattered remnants of the swarm of phantasmal things. Once more we ploughed through them. Again and again he turned, dashed at them, hunted them down, chased them as a hawk pursues a fleeing swallow, until my head swam, until I was dizzy, nauseated, half-conscious; until not a single dim white form was visible. Then only did he drop earthward, and like a glutted hawk, come to rest.

CHAPTER XV

Deliverance from the Heavens

WE found the members of the patrol more scared than hurt. Although they had been attacked by a horde of the creatures, yet they had not actually been touched, for their gunfire had driven the things off, though apparently the bullets had done no damage. Why the horrible beings should have been so affected by the discharges of firearms, which inflicted no deaths nor serious injuries upon them, we never knew. But we assumed it was the effect of the concussion of the air resulting from the explosions, and that these creatures, delicately balanced, scarcely able to keep afloat even in a heavier air with a far greater gravitational pull than on their own sphere, were easily upset, knocked about and temporarily overcome by the disturbances of the atmosphere. Whatever the cause, it was always the same. The discharge of the firearms would throw them into confusion and drive them off, although as in this case they might return again and again to the attack.

But the two men had been driven almost mad by the terror of the things swooping at them, and as our machine descended and they realized that the creatures had been destroyed to the last one, they dropped, weak, helpless, utterly exhausted, to the ground. The next instant they were overcome with violent nausea as their nostrils caught a whiff of the stench emanating from the plane. Oddly enough, we who had been in the midst of it, had scarcely noticed it, for as is the case with many vile odors, one's olfactory organs or nerves seem to become dulled or immune after the first few whiffs of the stench. But the fellows' sickness produced by that revolting smell was redoubled when they saw the ghastly objects that fairly covered the airplane. Even we, who had been through the thick of it, who had literally been showered with torn, mangled, mutilated fragments of the things' bodies, felt a bit faint as we gazed at the evidences of carnage littering our machine.

The propeller was wrapped in strips of livid flesh, clogged with gelatinous matter, and the wings were burdened with the dismembered fragments. It would be impossible to use the plane until it was cleared of the ghastly débris, and with long sticks we set ourselves to the nauseatingly repulsive work. Among the accumulated remains upon one of the wings were several large masses, and although none were entire bodies, and all had been cut, mangled and crushed, yet from them we obtained a fairly good idea of the appearance of the creatures. The bodies were shapeless, pulpy, much like the bodies of squids or cuttle-fish in structure, but more membranous and translucent. About the middles, and extending down one side, were hundreds of small, delicate, tough and elastic filaments of horny membrane, which, we assumed, were the organs of cilia by means of which the things moved or flew, and whose rapid vibrations had produced the halo-like effect I had noticed. In front of these (I say front because they appeared to be nearer the head) were several long arms or tentacles ending in four finger-like digits, each bearing a powerful sucker (something like the toes of a tree frog or a chameleon) and beyond this was what appeared to be the head, a great, rounded mass of jelly-like consistency composed of scores of semispherical smaller masses in the centre of each of which was a baleful green eye.

And in the midst of this horrid, gelatinous mass was a long tube, coiled like a clock spring, and bearing at its tip a circular mouth, whose edges or lips were studded with hundreds of razor-sharp, lancet-like teeth or blades; the devilishly designed organ that enabled the things to bore those neat round holes through skin and flesh and suck the blood of their victims.

We shuddered and felt faint as we examined them, as we thought of those keen-edged teeth boring deep into our vitals, that living tube feeling its way to the very root of life. But we could not dwell long upon such horrors. Again the far-off sounds of gun-shots came to us. There was work to be done, slaughter before us elsewhere, and hurriedly clearing the machine of the last remnants of the dead creatures, the aviators scrambled aboard and roared off, leaving Jameson and myself with the two other members of the patrol, for I had had enough of those battles in the air and had no wish to repeat my experience.

There was no necessity of detailing all the events of that night. Everywhere it was a repetition of what I have already described. Wherever the things were seen the airplane rushed to the scene and annihilated them, until its fuel was exhausted and gray dawn lightened the eastern sky.

Yet despite all our vigilance, despite the terrific destruction we had wrought daylight showed us that we had not escaped unscathed. Nearly one hundred head of cattle and six colossadons had fallen victims to the things, and four members of the patrol lay dead, mere husks of men, with their empty rifles and ammunition belts telling the tale of their tragic, horrible ends. Yet we felt we had won. For every death the creatures had caused, we had destroyed hundreds, thousands of the beastly things, and though we did not flatter ourselves that we had completely exterminated them—we knew, for example, that those that had killed the four men had escaped us—still we felt there could not be many remaining, and that, in one or two more nights we would be able to annihilate them completely.

How little we knew of the incredible horror of what we had to face!

That night the demoniacal things seemed to be as numerous as ever. They were everywhere, and though no human lives were lost, the loss of livestock was even greater than before. Where did the spectral things come from? Where did they hide during the day? And what would be our fate when—as would soon be the case—our fuel was exhausted and the airplane, our only means of destroying them, would be useless?

THERE seemed but one solution, one possible way of saving the lives of any inhabitants of the accursed valley: to flee to Pacifica where, so we learned by our radio telegraph, there had been no signs of the Moon Children. But it would be a week ere our ship would arrive. It would require days for our people to embark; it would take several trips of both ships to transport us all, and each trip would occupy nearly three

weeks. It would be months before the thousands of inhabitants of Chincana could be removed, together with their possessions, and long before then—yes, within three weeks at most—we would have used the last of the airplane fuel, and the machine, our sole protection, would be utterly useless. Some—a few hundred of the inhabitants—might be saved, but the others—thousands of men, women and children, appeared to be doomed to a terrible and unthinkable fate.

But we made an even more disconcerting discovery. We had given no thought to the piles of mangled masses of the dead which had been dumped from the plane after each battle or to the hundreds of creatures that had fallen to earth dead, torn to bits, during the aerial carnage. We had been far too busy to bother over such trifles and had left the shattered carcasses to the buzzards. Then one day we discovered that these carrion scavengers would not touch the things, that they still lay where they had fallen, and fearing a pestilence from the decomposing piles, we took steps to dispose of them. Judge of our unspeakable amazement, our indescribable horror, when we found that the remains had not decayed, but that each fragment was alive! Nothing that we had hitherto seen or faced was so terrible, so ghastly as what we now saw. Each strip of membrane (no, I must qualify that, for it was only when there were masses of those frogs' egg-like portions of the heads that it was so) was a living, larva-like thing, a terrible, revolting, gigantic maggot! But that was not the worst. The accumulations of shattered, mutilated remains appeared greatly reduced and, a moment later, we understood the reason. The larval things growing from the jelly-like fragments matured with amazing rapidity. In an incredibly short time they had become complete fully grown creatures and rose in swarms. There was no end to the ghastly things! The more we destroyed, the more arose to beset us! We were literally sowing dragons' teeth!

No wonder we had seen no diminution in the numbers of the things. No wonder that, despite all we eliminated, each night brought as many more. It was a hopeless battle, which eventually must overwhelm us!

Yet perhaps we were not yet too late. By utterly destroying the fragments as fast as they were brought down we might yet win, might yet be saved ere our precious fuel for the plane was exhausted. Immediately, gangs, small armies of men were organized, and the ghoulish task of burning and then burying the mangled remains began. Everywhere over the valley great fires blazed and black smoke darkened the sky, and everywhere deep pits were filled with the charred, shrivelled, half-incinerated things.

And though the members of those still living seemed incalculable, though night after night thousands were slain, still hope again rose in our hearts for each night there seemed fewer of the swarms and the swarms appeared smaller.

And at last we discovered their daylight resting places. We had searched everywhere—had scoured the fields, the groves, the jungles in our hunt for the things; beaten the underbrush, examining caves, but all in vain.

But one morning as with Frank and Padre Antonio I was making the rounds, seeing that no remains were left unburned and unburied, we paused for a brief rest in the shelter of a thick grove of trees that cast a welcome shade, I happened to glance up and stood transfixed, staring. Covering the branches high above our heads were great masses, immense pendent excrescences, like gigantic bunches of dark, purple-red grapes. For a brief instant I stared, puzzled, wondering what the things were. Then suddenly I saw, suddenly I realized the truth. They were the ghastly, vampirish, awful things we had so long sought without result! No longer were they misty, white, translucent, ephemeral-looking creatures. Satiated with their feast of the night before, glutted, swollen, filled with the blood of their victims, they were clinging, hanging to the branches, to one another like great pot-bellied bats!

Padre Antonio crossed himself fervently and muttered a prayer as he gazed at the horrible things, a thousand times more horrible than they had ever appeared when dancing, like disembodied spirits, in the moonlight. Frank shuddered and an ejaculation of horror came from his lips. I felt sickened and revolted at the sight. With all our senses focused upon the repulsive things we had not noticed that the sun had disappeared, that dark clouds had come drifting across the sky, until with a roar of great drops upon the foliage a sudden torrential shower poured down, the first real rain we had had in weeks. Thankful for the shelter, we dodged back against the boll of a great tree. And then an amazing thing happened, a thing so horrible, I still see it in my dreams and awake screaming. Above the roar and patter of the rain we heard strange sounds from the tree-tops—low, indescribable grunts and groans, strange buzzing sounds as from millions of angry bees, querulous, high-pitched squeaks that grated on our nerves like files drawn across our teeth. The next instant a great, dark colored body came hurtling down from far above. It struck the sodden earth with a horrible, squashy thud, and like an overripe fruit, burst open, spattering its thick, purple stinking contents—coagulated blood—upon trees, earth, and on all sides.

BEFORE we could move, before we could flee, another and another came tumbling earthward, to strike and burst as had the first, until in a moment the horrible blood-filled things were fairly raining down—great, ghastly living bombs—and the grove was filled with a red haze and the reeking stench of a slaughter-house. Dodging, shrieking with the horror of it all, filled with terror of being struck by one of the ghastly things, we dashed from the wood into the open and the pouring rain. And still from within the grove we could hear the thudding sounds of falling bodies, the explosive plopping noises, as they burst asunder. The same thought filled the mind of all three. The things could not withstand rain! But was rain fatal to them only when resting, filled with the blood of their victims, or was it equally fatal when, like evanescent ghosts, they swarmed at night? And were these fallen things actually dead or would they, too, revive, form new individuals, produce a dozen new horrors from every one that had fallen?

As this question came to us Padre Antonio's lips shut in a firm tight line, and turning, he stalked deliberately towards the grove where the things were still falling like wind-blown fruit. With an effort I forced myself to follow, and Frank did the same. There was only one means of learning the truth: to investigate at once, and horribly repulsive as it was, we forced ourselves to the task.

Few of the things were falling now, there were no more to fall, but the ground was like a shambles and the fetid, awful stench of blood was almost unbearable. No battlefield ever presented such a scene. Earth, trees, brush, everything was bathed in blood, dyed a livid, purplish-red. With gritted teeth, tightly shut mouths, using almost superhuman efforts to control our nerves, we examined the remains of the burst and shattered things.

But there was no sign of life in any, and as the rain trickled down and fell in streams upon the bodies, we saw them melting, actually dissolving, before our eyes. In the wonder of the thing we almost forgot our horror

and the nausea that beset us. It was as if the things were made of glue or paste.

One moment a split, mangled, blood-covered thing would be there, its shattered pulpy body as flabby as an empty bag, its frill of flight organs bent and broken by its fall, its finger-tipped tentacles twisted and sprawled, its gelatinous head a shapeless mass, its lifeless green eyes protruding, hanging by threads where forced out by the fall, its blood-sucking proboscis trailing like a writhing serpent on the ground. The next moment it would be a formless blob of pulp, running, spreading slowly over the earth, until softened, dissolved, merging with the myriad rivulets of water, it had vanished completely from sight. Assuredly there was no chance of these things reviving, of springing into new life. They were gone forever, and as with one accord we three dropped to our knees there in the drenching rain, on the bloody soil, among the rapidly vanishing masses of pulpy death, and gave fervent thanks to Him who had blessed our valley with the rain, and prayed with all our hearts that the God-given deluge might continue throughout the night until not a living Moon Child nor a trace of their bodies remained in the world.

CHAPTER XVI

Chincana Avenged

As if in answer to our prayers, the rain fell all day and for most of the night. Not a single one of the things was seen by the patrols and not a single creature reported killed. Still we dared not relax our constant vigilance. For all we knew some might have escaped the rain even if, as we had every reason to believe, the downpour was fatal to them. Some might have been hiding in shelters or among the foliage so dense they had not been wet or again, for all we knew, they might come from a distance where there had been no rain. Finally, if—as we now believed—they came from the moon, we had no basis for assuming that they might not continue to arrive, even if, owing to the rain, they were forced to wait until it was again clear and dry.

The very fact that they appeared so susceptible to rain argued in favor of their lunar origin, for our astronomers (as everyone now knows) had proved (at least to their own satisfaction) that the moon was practically rainless, that there was no actual water—as we know water—upon our satellite, and that the areas that I have referred to as "seas" or "oceans" were, in reality, merely its deeper valleys.

Of course, there had been heated arguments among both laymen and scientists in regard to the possibility of the things having come from the moon. Some declared that it was impossible that they could ever have dwelt there. They asked how blood-eating creatures could subsist on a sphere that was waterless and hence could not sustain warm-blooded or even cold-blooded creatures. To this the supporters of the theory replied that, in the first place, just because earth-animals required water to subsist, did not prove that lunar creatures required the same. They pointed out that—in the old days when there were vast waterless tracts or deserts on earth—many creatures (both warm and cold-blooded) had dwelt in the deserts and required no water. They called attention to the fact that innumerable forms of vegetation could (and formerly did) thrive without water, drawing their necessary supply of moisture from the atmosphere; that these vegetable forms growing in waterless regions contained large amounts of water, and that animal life—even human beings—could secure enough water from the stored supply in the plants to sustain life. They also reminded their opponents that the Moon Children, as they were already called, were not susceptible to moderate amounts of moisture, that they had been seen repeatedly on misty, foggy nights and that the moisture upon the moon might be—if there is any there—ample to sustain vegetation of sorts as well as animal life. Very probably, they added, the animal life thereon had become scarce—perhaps had been suddenly reduced by the alterations in the moon's orbit and proximity to the earth—and the blood-sucking beings had thus been forced to seek the earth to secure food. Finally, in support of their contentions, these men pointed to the fact that none of the assumed lunar visitors had inflicted Pacifica, the reason being beyond question, they could not traverse large bodies of water, to cross which would necessitate being abroad in the daytime.

But the opposition came back with a query: How did the things get there? How could any living things cross nearly one hundred thousand miles of space if they could not survive one day's exposure to sunlight?

Naturally no one could answer that question. But neither could anyone explain why creatures impervious to bullets should be instantly killed by rain; why beings whose appearance would indicate that they were marine creatures should fly in the air; why their bodies should not decay in the sunshine but should reproduce their kind like so many bits of earthworms, and yet should dissolve like so much salt in rain water. All we knew was that the things had beset us, that we had fought a losing battle with them and that, apparently, the Almighty had come to our aid with the blessed rain.

But there, once again I had wandered away from the thread of my story and have been digressing.

As I said, none of the things were seen that first rainy night and no damage was caused by them. But it was fortunate that we did not put too much faith in the supposition that all had been annihilated by the rain. The following night was clear and two small swarms of the things appeared. They were, however, quickly wiped out, and their remains—now that we knew that water would dissolve them—were quickly and completely disposed of by this simple means. Then, for several weeks, there were nights when none appeared, while on other nights they were out in considerable numbers.

There was no longer any question about our people desiring to migrate to Pacifica. Our terrible experience, our weeks of horror, had destroyed all desire to remain at Chincana, had annihilated all love for the valley. The morale of the inhabitants had been shattered beyond repair. All felt, all lived in constant dread that at any time hordes of the ghastly Moon Children might appear, and even the Inca and his people—though now we were all one people and no line could be drawn between those whom we had found in the city and those of white blood—were in favor of an exodus. There was nothing to hold us. Arrangements were rapidly made to transport the inhabitants and their property to Pacifica. It was, of course, a tremendous undertaking.

Only a portion of the inhabitants could be embarked and transported at one time and all were anxious to be the first. But it was decided that families with children should have the preference, that married men should go next, that single women should follow and that the single men should be the last to go, the younger being given preference over the older individuals. By the time our ship was ready to sail, the Pacificans' vessel arrived, and as the two vessels steamed southward with their cargoes of some two thousand souls, we in the valley gathered together the necessities, the useful articles, the personal property and all those things to be carried to our new homes, and prepared them in readiness for transportation. And each night we continued to patrol the valley, for our flocks and herds were still there and thousands of people yet remained.

It was the rainy season, however, and as we were convinced that the Moon Children would not appear except on clear nights, there were many nights when we could rest from our duties.

Though the terrible things had decreased until only individuals or groups of three or four danced above the tree-tops where thousands had cavorted before, these few were in their way far more dangerous than the great swarms had been. They had learned—whether by instinct or whether by experience I do not know—to fear man and especially to fear the airplane. Rarely could we come within rifle shot of them. At the first distant roar of the motor they would whisk out of sight. And despite every precaution, they would manage to destroy our domestic beasts. Yet, in a way, their wariness and fear of human beings aided us. They could not discriminate between a man with weapons and an unarmed individual, and by posting men about the cattle corrals we found the things kept away, and thus many of our beasts were saved. But it required men of unusual bravery and heroic courage to pace back and forth through the night, unarmed save with a cudgel or some agricultural utensil, while hungry for blood the ghastly Moon Children were hovering near.

Hence only a few of our cattle-yards and colossadon pens were properly guarded, and as we feared to exhaust our meager supply of airplane fuel in attacks on single individuals or even upon groups of a few that, despite every effort, usually evaded the attack, we really made little headway and had to be satisfied if the things did not increase in numbers.

So the time passed until at last the two ships returned and a second cargo of people was sent southward, until for the third, the fourth, the fifth time they made the trip and only men, the remaining live stock and property remained in Chincana.

THEN it was, as we patrolled the valley one night, more from force of habit than through any real good we could do, that a great misty cloud came drifting down from the upper air, and to our unbounded horror, we saw that it was a vast swarm of the awful Moon Children, a veritable army descending upon the stricken valley. Never had we seen the terrible things in such numbers. Never had we seen them advancing in this manner. They were not dancing, gyrating, weaving in and out in a mystic rhythmic quadrille above the trees, but were moving slowly towards us in orderly formation, a great wedge-shaped aggregation of tens of thousands of the ghostly creatures. From every side our men came hurrying. Rifles flashed and guns blazed, the night was shattered by volleys, yet that horde of misty figures came inexorably onward.

Then, from up the valley came the roar of the motor as our airplane rose and came dashing headlong to battle. Never will I forget the sight as the machine hurled its great bulk into that close-packed swarm of the fearful beings. Fragments of things fell to the earth like giant hailstones, the roar of the motor was muffled by the suffocating gelatinous mass. In a moment the plane vanished from sight, as completely buried, as invisible as though it had entered a dense rain cloud. Only the soft, squashy, sodden thudding of bodies as the machine ploughed through them, the downpour of torn, cut, battered, shredded fragments marked the plane's passage. Awed, hypnotized by the sight, powerless to move or speak, capable only of gazing transfixed at that terrific battle, we stood there.

Despite the thousands that had been destroyed, despite the great swath the machine had cut through their ranks, the Moon Children seemed numerous as ever. Then, suddenly, without warning, they seemed to disintegrate, to thin out. The almost solid mass broke into hundreds of columns, into scores of groups, into thousands of individuals, and separating, whirling, rising rapidly, they vanished in the sky. And as they broke ranks, overcome, driven back, vanquished, I saw the airplane spin dizzily, and then come plunging to earth

Horror-stricken we dashed towards it, galvanized into life and activity, oblivious of the slimy, pulpy awful mass underfoot, thinking only of the two heroic men whose lives we felt convinced had been sacrificed in this epic battle in the air.

One glance at the shattered, twisted machine confirmed our worst fears. The two aviators were dead. Yet even in our grief and sorrow at their loss we realized that they had died as they would have wished, that death had come swiftly, painlessly, and we bowed our heads and gave thanks that no round punctures showed upon their skins, that they had not met an awful fate at the hands of the Moon Children. They had died like the heroes they were: victorious, triumphant, fighting gallantly to the very last!

Reverently their bodies were carried from the scene of battle. The rest of the night we were undisturbed, and with daylight the two, who had sacrificed their lives to save others, were borne to the city and laid in state within the great temple, whose massive walls had seen the passing of hundreds of generations of human beings. There, clad in the gorgeous ceremonial robes of his ancestors, our Inca himself prayed to Inti and to the Christian God for the souls of our comrades.

NOW that the airplane was gone and we had no defense against the hordes of Moon Children, we felt sure they would renew their assault upon us. We realized that to struggle farther would be futile—merely a sacrifice of lives. All we could do was to preserve our own lives and the lives of some of our live stock. Within closed doors and solid walls we would be safe, and by driving the cattle and the remaining colossadons into the city, and securing them within some of the many buildings now empty and deserted, we could hold our own until our ships returned for us and we deserted the valley—to the Moon Children forever.

Slowly the days passed, still more slowly passed those awful nights as we waited for the coming of the ships and for deliverance. Then, when the glad tidings reached us that on the morrow the two vessels would arrive, the Inca spoke. For weeks no rain had fallen; the valley was parched and dry, acres of abandoned wheat stalks, maize, sugar-cane and other crops spread like a dull-golden sea across the land. No living soul, no living beast remained outside the city's walls. That night, our last night at Chincana, we would wreak a terrible vengeance upon the hordes of Moon Children.

The Inca's plan was simple but would be terribly effective. It would require some courage but it would hold little danger, and the Inca himself insisted upon taking the lead. Great piles of brush, dry grass and inflammable things would be piled about the valley just outside the city. At dusk we would go forth, carrying our weapons in case of need, tempting the Moon Children to attack us. But as soon as they appeared, before they could come dangerously near, we would set fire to the piles of tinder and see our terrible enemies utterly destroyed by the conflagration that would sweep the entire valley. It would be a final gesture, a final decisive blow at the ghostly hordes that had forced us from our homes, that were a menace to all mankind.

And as the sun set and darkness fell upon the valley (for the moon would not rise until late) we stood expectant, keyed up, excited, watching and waiting for the faint, mist-like forms we were sure would come. We

had not long to wait. For days the things had been without food; they must have been famishing, starving. Scarcely had darkness settled over the land than from every side, converging in columns, groups, swarms, the phantasmal things came, gyrating, dancing towards us and their expected feast. But it was the dance of death for them. Controlling our terror and our desire to seek refuge in our dwellings, we stood waiting beside our piles of tinder, awaiting the flash of fire from the Inca, the signal for every man to touch match to the heaps of inflammable stuff within reach of his hand.

Nearer and nearer came those swarms of the Moon Children. The very air seemed filled with them. The air was clouded by them. The soft purring sounds of their swiftly whirring cilia rose like the soughing of a wind. Not until their advance guard seemed almost overhead did the Inca move. Then, stooping quickly, he touched fire to the pile before him and leaped back. Instantly hundreds of tiny flames gleamed like fireflies in the darkness. With a crackling roar a vast ring of flames leaped high in air, illuminating the valley, reddening the sky, and transforming the oncoming, misty hosts to pale-pink, undulating clouds. Great columns of lurid smoke rolled upward, showers of blazing sparks soared hundreds of feet in air. For a brief moment the oncoming thousands of floating, whirling, dancing, terrible creatures halted. Then, like a reversed cataract, they poured upward, a rushing, confused, riotous mass striving madly to retreat before that wall of onrushing fire and smoke. But the thousand in the rear were packed into an almost solid mass. The draught of the roaring flames hurled the frail things this way and that. We saw them shrivel, blacken, go flying off like the cinders that surrounded them. By hundreds, by thousands they were destroyed. Hordes, swarms, broke from the main body, and dancing, gyrating madly, with incredible speed, tried to escape the fury of the flames. The valley, for acres around, was a seething furnace.

Never was there such a holocaust. It was terrible in its immensity, awful in its thoroughness. It would have been heart-wringing, pitiable, beyond the power of men to endure, had the victims of that wholesale sacrifice been other than they were. But they were demons, incarnated horror, and we gloated and exulted as we watched them seared, shrivelled, consumed in their aimless, frenzied efforts to escape their just fate.

Possibly a few may have escaped. Who can say? But I doubt if one survived. We had wrought a terrible reprisal, we had utterly destroyed the valley we had loved so well. But for the first time in months we felt wholly safe, wholly satisfied, wholly content. And the two heroes, sleeping the endless sleep within the battered plane in the royal tomb, were avenged.

CHAPTER XVII

Pacifica—At Last

EARLY the next morning we left the city and the valley, now a vast, smoking, blackened, devastated waste, and driving our flocks and herds, and with our colossadons heavily laden with burdens, we took the road to the sea. In the offing the two ships rose and fell on the long swell, and great was the relief and the joy of those on board when they saw us upon the shore. Far out at sea they had seen the lurid glow from the conflagration, and fearing some catastrophe had overtaken us, they had sent frantic calls by radio. But they had received no answer—the operators having been, like everyone else, watching the fire and the destruction of the Moon Children—and our silence had filled them with dread fears that none of us remained alive.

No time was lost in embarking. Boat-load after boat-load of bags, bales and bundles were ferried to the ships and hoisted on board. Then the cattle were swum out and slung upon the decks. But to have shipped the huge colossadons would have been an impossible task. There was not a tackle, a derrick nor a hoisting engine capable of lifting the gigantic beasts. In fact we had never contemplated attempting to embark the creatures, and having relieved them of their loads, we turned them loose to roam free and at will in the jungles with their wild kindred. Then, boarding the vessels ourselves, we steamed southward for Pacifica.

THERE is little more to relate. It is not needful for me to dwell upon our history after our safe arrival in Pacifica, for all that has been duly recorded and is known to all—our discovery that, instead of an island, it was a vast continent stretching to the southern pole and beyond, our slow but steady progress towards a newer and better life and civilization, our social and governmental organizations instituted by the benign Inca and good Padre Antonio, our epochal world voyages on which we discovered the other surviving communities of our fellow men to whom we carried word of our marvelous land, of our Utopian lives, of our progress and our aims; how thousands flocked to join us and how Pacifica became the great centre of our present-day world and our Universal Brotherhood. All these matters, as I say, are known even to our children.

But it is exceedingly difficult, however, for one who has lived to see so many epochal events of our history, who has been so intimately associated with the building of our civilization, who has played a not unimportant part in our struggle, who has personally known our revered Inca, saintly Padre Antonio and such heroes as Grayson and Ellis, who has seen such horrors as the Moon Children and has battled with the Misguided Ones—to know when to stop.

To those of us, whose lives have been limited to our present-day conditions and our civilization, the past seems vague, scarcely more than a tradition or a fable. It seems inconceivable that millions should have been destroyed, that human beings should have killed one another like savage beasts at the mere command of one man, for the mere aggrandizement of individuals, the acquisition of lands, the desire for wealth, the ambition for power or because of religious beliefs.

But, thanks to the Almighty and to the Inca Chukis-Huaray and to gentle, loving Padre Antonio—though perhaps as much to the madness of the moon, such days of horror and inhumanity are forever past.

Today mankind is united in an insoluble bond of earnest desire for the betterment and advancement of the entire race. Jealousies, intrigues, dreams of individual power no longer exist. We have no rich, no poor; all share alike in the bounties of Nature intended by the Creator for the benefit of all; there are no intolerant, narrow-minded discriminations because of race, family, or creed; intellect and accomplishment are our only standards; we have no drones, no idlers, no lawyers, no courts, no bankers, no trouble makers, no jails, no criminals. And perhaps best of all, we have none of that worst of all evils—we have no money.

And if our revered Inca looks down upon us—as he surely must, and if good, loving and lovable Padre Antonio's spirit keeps watch over us—as it most surely does, then they must be supremely happy and contented spirits. All that they planned and hoped to accomplish has been carried out, and the end towards which they labored and taught and led us, and to which they devoted their lives has been attained.

THE END

He then presses a button, which starts his engine and releases him from the service station mast.

IN these days of unemployment and financial depression, with the desire for maintaining high standards of living undiminished, we might look seriously into the really ingenious and, it seems to us, practicable suggestions which Dr. Keller offers in this story, which he characteristically calls "Service First." Apparently our psychiatrist-author is himself a victim of this work-a-day world and being a resourceful dreamer—but perhaps too busy to execute his dreams—he has concocted a veritable paradise. We hope some enterprising young inventors will become duly inspired.

Service First

By David H. Keller, M.D.

Author of "Revolt of the Pedestrians," "The Eternal Professors," etc.

HENRY CECIL left the office at the usual time, fought his way to the subway, stood for tortured minutes, pressed on all sides by sardined humanity, struggled till he escaped out of the train to the open air, walked through irritable thousands to the apartment house where he lived, entered the elevator, which normally accommodated six, but on this trip held ten, left the elevator at the twenty-second floor and opened the door to his one-room apartment. His wife, a stenographer, had won her way home ten minutes earlier than he had and was heating the supper, hastily purchased *en route* from her office. She had gone through the daily mail and had news of the most serious nature to tell her husband. She hated to do it.

"They have raised the rent again, Henry."

He took off his hat, threw his coat on a chair, kissed her and went to the built-in cubicle that served for a bathroom. There he washed and prepared for supper.

His first comment was, "These beans are better than usual, Arline."

"I think so. I bought them at a new store. Running a special on baked beans today. I saved three cents on the supper."

"That is good. Now, what do they want next month?"

"Seventy-five dollars."

"Fifteen more than we're paying now."

"Yes—only fifteen more."

He ate the beans slowly. After his half was all gone, he took a crust of bread and wiped the plate carefully. He drank a half glass of water. Then, pushing the plate away, he gave his decision:

"This is the end of trying to live in a respectable neighborhood. We have sacrificed everything we could without completely lowering our efficiency as workers. There is only one thing to do and that is to move."

"I wish we could stay here."

"So do I. I would like to spend a week in the country. I would like a car of some kind. It would be nice to be my own boss and make enough so you would not have to work. There are a lot of things I can wish, but that does not get us anywhere. I asked for a raise today and came near being discharged. The only way I can see, the only possible answer we can give, is to leave and go and live with the foreigners. Or," and he looked around the apartment, "perhaps we can take in a boarder."

"That is your old-time humor, Cecil."

They both laughed, and he, encouraged by her smiles, went on:

"We have a wonderful, fine, modern, one-room apartment. Last year there were over a thousand apartment houses built in New York City and all of them were divided into one-room apartments. We are imitating the bee; we are living like the termite. And now they want seventy-five dollars a month for this. A room that is a bedroom by night, a parlor by day and an eating place morning and night. We have closets that are classified as kitchen, bath, and clothes rooms. When we take the bed out of the wall, there is hardly any space left to walk around it. When your mother comes, we give her the bed, you sleep on the fire-escape and I recline like a pen-knife in the bathtub. We have denied ourselves all the luxuries and most of the necessities, in order to live in a nice neighborhood, where we do not know a single neighbor, and now they add fifteen dollars to the rent."

"Nothing is free in life!" exclaimed the wife sadly.

"Yes, something is. We can go up to Central Park and take all the air we want for nothing. Say, that is an idea! The air is free. If only we could live there!"

"Why not invent an air home, Cecil? You used to have the most wonderful dreams. I do not want to hurt your feelings, but I really thought at one time, before we married, that some of your inventions would amount to something."

"I lacked two things, my dear. One was money and the other was technical knowledge. I never could stop work long enough to really patiently labor at an invention till it was marketable. Even then I would need to possess a greater scientific knowledge than I have, to even sell the idea. My dear, when you married me, you made a mistake. You should have married a laborer, a plumber, a plasterer or a carpenter instead of a white-collar clerk, who works at a desk by day, dreams of inventions by night and, in the meantime, allows his wife to work because otherwise he cannot as much as provide a one-room home for her. You are a clever woman, but when you married your foot slipped."

Arline started to cry. The work had been hard that day. The notice of increased rent was too much for her, so she easily passed from hysterical laughter to uncontrollable tears. Cecil patted her gently on the head as he stood beside her chair.

He whispered, "Don't cry, Mama."

And then he threw his fist into the air and went on:

"Papa will find a way out for you. You just trust Papa."

That was a way they had, of calling themselves Mama and Papa. They had no child. They knew that unless a miracle happened, they never could have a child. Not in a thousand years could they finance a baby in the family. Their union was no more a family than their apartment was a home. When they used the words home, Papa and Mama, they spoke in the same sense as they did when they talked about Heaven and a trip to France.

SO, all that night Henry Cecil lay sleepless by the sleeping woman on the bed that was let down out of a hole in the wall. He had promised her that he would find a way. He had never failed her. Rash had been his statement; almost impossible his words, that he would find a way—but he had said it and he would

have to make good. Sleep deserted him; he went into every possibility and found nothing but a closed gate, a brick wall, a hopeless future. Desperate, he dressed an hour earlier than usual, went down and bought a morning paper, and returning to the apartment, sat down to read it while waiting for his wife to respond to the ever-present threat of the alarm clock.

When he first glanced over the paper, Cecil thought that the news was of the usual uninteresting nature. The same things were happening. Three gangsters had been taken out for rides and killed, but the Commissioner was confident of finding the murderers at once and threatened to dismiss a dozen detectives if they failed to deliver the guilty parties. Several society women had secured divorces and one had married for the third time. The champion home-run hitter had struck out. At the Conference of the Nations, the Seventh Agreement for the paying of the war debt had failed to secure the approval of Iraq, therefore everything had to start again. Ah! *here* was some real news.

Jones and Jenkins had broken the air record for continuous flight, having remained in the air thirty-seven days and six hours. During this time they had been supplied with gas, oil, and entertainment by the service plane of The Universal Air Corporation. Continuous flights in any direction would soon be a possibility. Service Stations in the Air! Why come to earth to refuel? A non-stop flight around the earth was being arranged for. That was news. Cecil was properly thrilled. And here was something else.

The noted President of Universal Air Corporations in conflict with his landlord, Percival Provens, it seemed, rented a twenty-five-room apartment on Park Avenue. Though many times a millionaire, he had one peculiarity—a dislike to own property in New York City. He had rented this apartment and now his three-year lease was up and the landlord was asking two hundred and fifty thousand dollars a year more rent. Provens had refused to sign the lease. He stated that he was already paying more than the apartment was worth and that one of the greatest evils of the city was the high rentals. There was a statement from the man who owned the apartment house, showing that he was not making five per cent on his investment. Another statement from the head of the Realtors' Association to the effect that rents were no higher in New York City than they were elsewhere, considering the fact that the demand for apartments was so far in advance of the supply.

"Well, well!" exclaimed Henry Cecil to himself as he put down the paper and went out to the little, diminutive kitchenette and put on the oatmeal. "This rent problem seems to hit both the rich and the poor. Now I am sure that Percival Provens could easily pay that increased rent, but it seems to him to be an injustice. He, evidently, is mad at the idea that someone is trying to rob him. There goes the alarm clock. The parlor clock seems late. Pshaw! wonder why they call it a parlor clock? Wedding present. Old-fashioned aunt of Arline's sent it to her. Wrote and said she was sending us a parlor clock. Wonder how it would be to live in a house with a parlor? Priced those clocks. The old lady spent twenty dollars for it and it goes years without winding. Simply attach a plug to an electric light socket. That would be a good idea for a piece of machinery. Great to have a watch like that. Mine is always running down. Forget to wind it."

In a few minutes Arline came out to the kitchenette. The bed had been put back in the wall, and the table taken out of the wall and spread for breakfast. Two dishes of oatmeal, two cups of tea, two pieces of bread and butter. Done! Now for the fight in the subway.

"I see," said Henry as they waited for the elevator, "that Percival Provens has had his rent raised."

"Who is Percy? A friend of yours? Better find out what he is going to do. Perhaps we can take him for a boarder and have him use the clothes closet," was Arline's caustic reply. "Better think fast, Henry, dear. We have to give the landlord an answer by the end of the week. You promised me we could stay if we wanted to."

"I am thinking about it," replied her husband, kissing her good-bye and dashing into the subway.

When he was in the daylight again, he saw a crowd gathered in front of the office building where he worked. He joined it and finally found what it was all about. A man was selling rubber dolls that could be blown up.

"Blow 'em up and see 'em stick er tongues out," he was shouting.

Cecil reached over and handed the man a dime, grabbed a doll and rushed to the elevator. As soon as he arrived at the office he went to the head of the department and asked to have the day off.

"Mother-in-law dead?" asked the man.

"No. I just have business."

"Cannot spare you today."

"I'll have to go anyway."

"If you go, you're fired."

"All right, and you can give me my time. It's a dog's work for a dog's wages, anyway. I could earn more with a shovel, working in the subways."

HALF an hour later Cecil was on the street, jobless, with his hands in his pockets and nothing else. He went at once to the central office of Universal Air Corporation. In one way and another he finally reached the secretary of the President. This individual was supercilious and arrogant. He finally agreed to make an appointment for Cecil to see the President at ten o'clock on the thirty-first of the following February. The man, without a job, walked out. Ten minutes later the secretary received word that his wife had been hurt and was in the Methodist Hospital. Naturally, he reached for his hat and hurried to her side. As he did so, Cecil passed him. Three minutes later the hopeful inventor was standing at the side of the President of Universal Air Corporation.

"I just had to see you, Mr. Provens," he said. "I could not wait for an appointment. We have a great deal in common, and I wanted to talk to you about it."

"Did you see my secretary?" thundered the busy official.

"I did. He, naturally, refused me an interview. He left the office soon after and I came in."

"There is nothing wrong with your nerve!"

"No. But listen to me. I had my rent raised yesterday and so did you. You probably feel as sore at the real-estate owners of this town as I do. Now, you are in the airplane business. Your company makes them. You want to see as many planes sold the next five years as Ford used to sell automobiles. I have read your articles in which you state that you want the nation to become air-conscious. Am I right? Now, suppose I give you a few ideas that will help you sell planes and, at the same time, give you a very sweet revenge on these property owners? Suppose I tell you how to take so many people out of the apartments that the realtors will be begging folks to rent their places? Would that be worth while?"

"You must be another inventor crank."

"I am, but I have something worth while. Will you listen to me? Will you give me half an hour?"

Under ordinary circumstances Provens would have had Cecil thrown out of the room. But he had a ten o'clock appointment with a man whom he disliked. Here was a way of escape from a disagreeable inter-

view. He called to one of his assistant secretaries and canceled the engagement and gave Cecil one hour of the morning.

"Now, here is my idea," said Cecil, sitting down on a chair right across the table from Provens. "Airplanes are cheap. Fifteen hundred buys one and twenty-five hundred buys a larger one with a fairly large cabin. I want you people to build a safe plane with a wonderful engine and as large a cabin as you can. The maximum cost ought to be three thousand or less. Sell it on monthly payments. Then fix up the cabin so two persons can live in it. The papers say that a plane can stay in the air indefinitely, so long as it can be serviced. I see that your company is thinking of building air service stations. Am I right? Now, when a young couple want to marry, they simply buy one of your planes. They live in it. All the comforts and necessities for them and the plane are supplied at a nominal cost from your service stations. They have no rent to pay. They own their own homeplane. How is that? In different parts of the city, erect large tubes. They fly to these tubes. The service includes parking privileges for the day. The men go down the tube to the ground in a circular escalator. When they are through work, they go up the tube, enter their plane, and spend the night in the air. If they want to soar, they can do so. If, on the other hand, they want to go to one of your air garages on the outskirts of New York, they can simply fly out there and alight on one of your aerial masts. The cost of the plane includes a certain amount of free service, say, for one year.

"You sell, not only the plane, but service. Of course, the things like gas and oil and food and entertainment would have to be paid for just as they are now.

"I know what your objections are going to be. You will say that the cabins cannot be furnished. That has been thought of. See this doll? It has a tongue, but when there is no need of that tongue, it remains in the mouth. Now, suppose the child that owns this doll wants the tongue to stick out, all he has to do is to blow some air up the doll's leg and out comes the tongue. That is the way I want the furniture of this cabin to be; made out of rubber. Man and his wife come in the plane and want a little supper. They press a button and the rubber table is inflated and comes up from the floor. Supper over, they simply deflate it by pressing another button. Time to go to bed, another button, and up comes the bed out of the floor or the side of the wall. Sleep over, the air is let out of the bed and it goes back. Have the doors the same way. Press a button; out goes the air and the door opens; press another button; in goes the air and the door blows up and fills in the doorway."

Percival Provens jumped out of his chair.

"You stop talking till I come back," he called as he left the room.

"And that is the end of my interview," moaned Henry Cecil to himself sadly. "Don't that beat all! Going nicely, and said just one word too much. I wonder what it was?"

But the President soon returned with three well-dressed young men at his heels. He introduced them to Cecil, and, ending, said, "These men are from my Department of Invention. Folks used to have a peculiar idea of inventors. Long-haired, solitary chaps, who gathered egg on their vests and starved to death. That is all old-fashioned. Practically no invention of today is the work of one man. I have an idea, just one idea, and I give that idea to the Inventors in that special department and each one works on different parts of it, and finally we have the new instrument and it is really the work of a dozen fine chaps like those you see here. I brought them here to listen to you. Because you have an idea. You don't have one idea—you have a dozen. I want them to take notes of your lecture. Start right at the beginning and tell them all about it."

CECIL breathed a sigh of relief.

"I thought you would not like it," he said.

"Like it! Man, it's revolutionary. We will show folks how to live! The ground is rather well bought up, but the air is still free. All we have to do is to keep quiet about this till every feature of it is patented and then we will take those poor people out of their apartments and give them a chance to move around in the air and, at the same time, be in their own homes. Will they do it? I'll say they will. When automobiles were so popular, do you remember how they used to go across the continent and camp out? I will make it possible for them to do the same thing with a plane. Every town of any size will have a service station for tourists to land on for the night. Service. SERVICE FIRST. What care I how little I make on the first price of the plane so long as I can sell service! How about the safety razor? Do you remember the time when they gave them away just to get new customers for the blades? Go on talking. Empty your mind of the whole matter. Talk as you never talked before. Fast! Boys, listen to him. As he talks, make notes, drawing, put down question marks about points you do not understand. This is the dawning of a new day for our corporation and for the poor devils who have had to rent their homes from rapacious landlords. What a revenge! Thought they could get a quarter million more a year from me. Now it will cost them billions."

"Now," said Cecil, "suppose we have a man and wife living in one of these planes, the cabin of which is fitted with rubber, inflatable furniture? Night has come. They inflate the bed and go to sleep. They know their plane is safe till morning, because it is on one of the service station platforms of the Universal Air Corporation. The next morning they jump out of bed and press a button and the bed collapses. Get the idea? They press another button and up comes the little breakfast table. They look over the weekly bulletin and select breakfast No. 27, served to two persons for twenty-three cents. They phone down to the restaurant of the service station and up comes the breakfast through the tube. It is in a little cylinder, all ready to serve. The wife opens the cylinder, takes out the paper dishes and spreads the table. Breakfast over, she puts the paper dishes and napkins back in the cylinder and sends it back on the reverse circuit. The man finds he has a few minutes of leisure, so he turns on the service radio and listens to the latest news, furnished by the service station. He then looks at the various dials and finds he needs five gallons of gas and a quart of oil. He sends the necessary signal and at once this is run into the tanks. He then presses a button which starts his engine and releases him from the service station mast. While his wife is dusting the cabin, he pilots the plane to the service station that is nearest to his work. Being a regular customer, he has a regular place to moor to. He fastens to this by means of a magnetic collar and then presses another button. A rubber door opens by collapsing and a rubber landing platform spreads out by inflation. He and his wife walk out on this platform; he turns around, shuts the door by inflating it and then he and his wife reach the ground by stepping on one of the platforms of the circular escalator.

"Gentlemen. Can you visualize that? I can. Now, the man and his wife work all day. Night comes. They go to the base of the service station and step on a platform of the ascending spiral escalator. At the level of their plane they step off and enter their home. Per-

haps they have supper there; or it may be they prefer to take a ride through the air to Philadelphia or Boston. No matter where they go, they will find every form of service at Universal Air Service Stations. Meals of the best grade at a low price, amusements, information of any kind, gas, oil, connection with the ground, electricity, a simple means of disposing of their wastes, no dishes to wash. Every form of duty and work required in the small home will be furnished by the Corporation at nominal prices to all purchasers of their airplanes.

"I spoke of amusements. Radio and television can easily be provided for. A daily news service, education for the children over the television and radio, in fact, everything that makes life easy and comfortable will be furnished. It will cost no more to live than it does now, because the service, supplied to thousands of regular customers, can be furnished at greatly reduced rates. Every plane owner will have a fair idea of what his living is costing him, and the bill for the entire service can be paid monthly, just like a telephone bill or a charge account at a store.

"I feel that the construction of the new style of house-planes will be a simple matter. The novelty will be in the metal masts, or columns, with their platforms for mooring the planes and supplying them with service. I believe that a magnetic plug to attract a collar on one side of the plane will be necessary. Through this plug will pass a number of tubes—one for gas, one for oil, another for electric service, and larger ones for the food cannisters and waste disposal service. The planes will be uniform in construction and the plugs will be uniform, so it will not matter in what city or to which service column your plane is fastened. The service will be equally available. Of course, it will be necessary in every large city to have a field for service columns for local use and another to care for the transient, or tourist trade, but wherever a homeplane of the Universal Air Corporation stops for the night, it will be well cared for, efficiently serviced and politely sent on its way the next day. Think of it! Everything that is needed in the home. Everything! All provided by one company and paid for once a month. No rent. No subway. No poisoning gases in the canyons of the city. A nice trip every night or, if desired, a quiet evening at home five hundred feet above the ground.

"Some day you are going to get rid of the gasoline question. I have a clock that will run a year without winding. Why cannot you do that with an airplane engine? Perhaps not yet, but how soon? I forgot the electric refrigerator, and the rubber, inflatable bathtub. For those who have babies, a rubber kiddie-coop, to be attached to the side of the plane. Absolute safety, absolute sanitation, no laundry, no dishwashing, no housecleaning, for there will be no dust. No cooking. A moving picture or a talkie in the plane whenever it is wanted and costing no more than tickets to the average theater would cost for two."

"STOP! For goodness sake, stop!!" thundered Percival Provens. "You have given us enough new ideas now to keep us busy for the next two years. The damnable thing is that every one of your ideas is practicable, and we would have planned everyone by ourselves long ago had we a single man in our department of invention who had imagination instead of technical brains. Gentlemen, take your notes and prepare a fifty thousand word statement of this innovation in air living. Draw your plans. Have it all ready for me to submit to my technical board of control by the end of one week. In all the work remember that our motto is going to be SERVICE FIRST. We want to tell the public that we are not selling planes or homes, but we are only placing them in a position where they can be entitled to our service. That is the big idea. Mr. Cecil, I know that your position is so important that you will not consider a place under me, but——"

"Let me be honest with you, Mr. Provens," was the startling reply. "Up to this morning I was a clerk in one of the business offices of a chain store corporation. I received one hundred and twenty-five a month. This morning I asked for some time off so I could have this interview with you. I was at once discharged. So, I am a man without a job, and unless I can get another, I will be without a place to sleep."

"What can you do, Mr. Cecil?"

"Keep books. That is what I do for a living, but, for pleasure, I dream. I call it inventing, but so far I have never patented anything. I just dream of all kinds of things that will make it easier for man to work and woman to do her housekeeping faster, so she will have more leisure for the finer things in life. Perhaps you noticed the idea of the paper napkins and dishes sent to the plane with every meal? Dinner over, put all the soiled papers back in the metal cylinder. You do not even have to move the table back. Just press a button and it is deflated and sinks back into the hole in the floor."

"I need a man like you in my office!" thundered the great man. "Every man that is working for me at a big salary is a go-getter, a doer, a man of action and determination. I need a dreamer to complete the combination. I will give you a desk right here, in my private office. You can select it. Your name will be on the desk. You can have a flower vase if you wish. A private stenographer. All you have to do is to sit at that desk as much as you want to and dream. Dictate those dreams, even though they are nightmares to your steno. Get me? Put the typed dreams on my desk, and draw fifteen thousand a year, and just as soon as we make the first homeplane, I am going to give it to you with free service for the rest of your life. Have you anyone in mind for a stenographer?"

"Yes, sir. I think that my wife will do very nicely."

"I thought so! A dreamer. Gets fifteen grand a year and thinks he can have his wife go on working. I have a woman in the office who is fifty years old and cross-eyed, but how she can take dictation! Cecil, that woman is yours. If you are a man, go and tell your wife she is fired. Take this five hundred dollar bill and treat her to a new suit, fur coat, dinner, and tell her you earned it by dreaming. And you will come back tomorrow? What would we do if you forgot what it was all about?"

"Oh! I will come back," and Henry Cecil rushed for the door. On the way out he met the secretary. One man glared, but the other simply grinned. Out on the pavement, a man was selling rubber dolls. Blow them up and their tongues stick out. Half a million workers had passed that man since eight o'clock. They simply saw a man selling rubber dolls.

Henry Cecil saw more. That was because he was a dreamer.

He rushed to the office where Arline worked. Stenographers were not in the habit of being hugged and kissed in front of everybody. Arline liked it in a way and then again she did not like it. Cecil did not care. He had her hat on and before she knew what was the matter, they were out in the hall, waiting for an elevator.

"Are you sick, Henry Cecil?"

"You bet I am; love-sick. I have at last commercialized a dream, turned a vision into cash. We do not have to move till we go into our air home. Where do you want to eat and what clothes do you wear during the next six months? I have a new boss, and he wants me to spend five hundred on you before the end of the day.

He says that I can have a stenographer all of my own. Do you want the job?"

The woman turned and faced her husband. The fact that the elevator had come and gone made no difference to her.

"Henry Cecil! Are you drunk? What is the job? How much do you get a year! What did you do?"

"I am going to draw fifteen thousand a year, and, just as soon as it can be arranged, we will have full maintenance. All I have to do is to sit at a desk and dream and dictate the dreams to a steno."

"I will be the steno!" whispered Arline. "From what I know of your dreams, I would not think of your dictating them to any other woman, and certainly not if you make fifteen thousand. I tell you what we'll do. Go and buy yourself a half dozen neckties."

AS quietly as possible, the Universal Air Corporation bought land in New York City. Most of the property was covered with old tenement houses and some with tin cans and goats. In over a dozen places antiquated skyscrapers would have to be torn down. Over in Long Island, in New Jersey and portions of Connecticut and along the Hudson large sections were purchased. Enormous contracts were entered into with the Bethlehem Steel Works. New airplane manufactories were constructed. Within a month a hundred million was spent. The outlay for the year called for ten times that much.

In the meantime, not a word leaked out in regard to the ultimate reason for this apparently reckless spending of money. The stock in Universal Air dropped heavily. It was rumored that their finances were in a desperate condition. After months of low prices it began to skyrocket. At last it was selling for five hundred a share and no offers. Percival Provens and his associates had made nearly a billion dollars by clever manipulation.

Meantime, steel towers began to rise here and there, in the city and all around it. On a city lot a tower, six hundred feet high, would be constructed. All the rest of the lot would be open to the air and sunlight. A thousand questions were asked as to the purpose of this new style of building. All of the thousand questions were unanswered. Out in the country these towers stood in rows, in companies, almost in regiments, but in every instance there was a large area of unoccupied ground around each tower, and as much unoccupied air. At regular distances on the tower peculiar projections appeared.

The Universal Air Corporation had suspended the selling of planes, pending the completion of their new design. Other manufacturers of planes went wild over the prospect of rushing their competitor out of business. The stock market see-sawed like a child's plaything. And then, simultaneously, in five hundred newspapers all over the nation, appeared a series of full-page advertisements.

"Why pay rent? Do you want to live in the air?

"Are you tired of confinement in an apartment?

"Then why not buy an air home and move whenever you please? Let Universal Air Corporation solve the housing problem for you. Live in the air and come down whenever you want to. Buy a plane and be your own landlord.

"We sell the plane and furnish the service. We think that our plane homes are wonderful, but our motto is going to be

SERVICE FIRST.

"Everything you need for your comfort and the proper functioning of your home will be supplied at our *SERVICE FILLING STATIONS* at a low cost on a monthly charge account.

"We are prepared to place one million families in air homes in the next year.

WILL YOUR FAMILY BE ONE?

"Sample homes are open to inspection at five hundred of our largest cities. Air service stations will be built according to the distribution of sales.

"If you have a plane home, you can go anywhere and find service and security and a home at one of our service stations.

WHY PAY RENT?"

The advertisement took the nation by storm. It was the first intelligent effort to solve the housing problem of the great cities. During the first week of the offering of the sample planes to inspection, police protection was necessary. The real estate men saw the danger. They formed a pool and secretly placed orders for the entire first year's production. They could buy these million homes, scrap them and still be money ahead at the end of the year. But Cecil had anticipated this and had advised Provens to only take orders from *bona-fide* customers and write in the article of sale the statement that the plane reverted to the company if the purchaser failed to live in it.

Foiled in this attempt, the real-estate barons went to Congress. The competition, they claimed, was unfair. Up to that time, no family had been able to survive without either owning or renting land in some form. The wealth of the cities, the prosperity of the nation largely depended on taxes on land and property. What would be the result if the majority of the people left the land and went to live in the air? Did not the air belong to the land below it? They referred to the Supreme Court decision of Baron vs. Strumples, in which damages had been awarded for trespass by a plane which flew over a man's house and damaged the roof.

The air, they claimed, was not free. The air belonged to someone, and if that was the case, then it was the property of the landowners. Competition in housing was welcomed, but it must be equitable. A bill was introduced into Congress, making a state and national air-tax possible, to be paid by the owner of the airplane, not to exceed ten percent per annum on the cost of the plane.

By the time this bill was introduced, a million planes had been sold and ten million orders received. That meant eleven million families that were interested, at least twenty million voters. They simply formed a lobby, financed by the air interests. The bill never came out of the committee. It died there. There was only one thing for the property owners in the large cities to do, and that was to reduce the rentals to a point where they were able to compete with the cost of operating an air-home. Slowly, this was done, but even at the attractive rentals no one wanted to live in an apartment when he could live in a plane.

Henry Cecil kept on dreaming. In these dreams he followed one course. He imagined every possible thing that he needed in his air-home to make life pleasant for himself and his wife, and then he dreamed of how these needs could be supplied. Thus, he was able to make millions of little families content and millions of little wives happy. For example, he saw the necessity of companionship, and thus dreamed of a club airship. The air communities had air hospitals, with medical service supplied at cost. Every thousand air-homes had the services of two air dental clinics. Air kindergartens and schools were arranged for as the demand for them grew.

For many generations the American citizen had been accustomed to owning his own home. When the time came that density of population made individual ownership impracticable, the automobile furnished gratification for the desire to possess property. The idea of air-homes combined the old and the new longings. The suggestion of Universal Air Corporation, that everyone could actually own his own home and take that home with him like the folded tent of the Arab, captivated the public imagination. In every way possible, the Corporation made it easy for families to buy, but had it been hard, the Common People would still have wanted to own their own air-homes.

AFTER the first million had been made and sold, several styles were placed on the market. There was a variation in size, motor power and the quality of interior furnishings.

Two things were alike on all of the planehouses, no matter how much they cost. There was no place provided for servants. Cecil had fought for that point. He had argued that the primary purpose of the planes was to make homekeeping easy for the wife whose husband had a moderate income. The household work was reduced to a minimum. If a wife was so rich and so indolent that she did not want to do even that little, she and her family ought to live in a city apartment with servant's quarters. The other point of uniformity was the connection and service tubes. A fifty thousand dollar air-home had the same connection that a twenty-five hundred dollar one had. Each plane had meals serviced through the same kind of a tube in the same kind of a cylinder, even though one meal might cost twenty dollars and the other twenty-three cents. There was no difference in the air service stations, the rich and poor had to go together. There was a difference in the home stations, but this was based on other social standings than financial ones. For instance, there were home stations where all the plane owners were college graduates. Others were patronized by groups of middle-aged childless couples, while still others were reserved for those with young children. But in no case was the distinction a monetary one.

The constant trade slogan of the company was SERVICE FIRST. The next advertising motto was SAFETY FIRST. It was realized that no one wanted to live in the air if he or she had to be worried all the time for fear of dying on the ground. Consequently, every known safety device was used in the construction of these air-homes and many additional features were invented that were absolutely new. The factor of safety was stressed. Every family received an insurance policy to cover any accident received while occupying the air-home, either while it was actually moving through the air or while it was resting on a service station. Accurate statistics were compiled after the first year, and it was shown that life and limb were safer in the air than on the ground.

So, the American public became air-conscious. It became the smart thing to live in the air. The men boasted of mileage made during their off hours and vacations. The women talked to each other about the excellence and cheapness of the meals served. The very fact that their homes could be easily moved in any direction made the air dwellers more glad to remain in one place. They began to enjoy the same scenery. They started to love the beautiful sunsets. Of their own accord, they secured injunctions against advertising balloons that threatened to disfigure the sky, as the old signboard had disfigured the public roads five hundred feet below them.

And, finally, the Universal Air Corporation thought, through the dreams of Henry Cecil, of the æsthetic side of life. He thought of an invention whereby the cold type of a printed page could be turned into beautiful spoken English, and at once to the other service was added a circulating library. All that an air-home owner had to do was to phone to the library that he wanted to hear a certain book. At once that book was automatically run through the audiphone and read aloud to him. He could sit on the pneumatic porch on a summer's evening and look at the sunset gilding the clouds and, at the same time, through the earphones, hear the latest novel or one of the world's classics. Music was supplied the same way. Thus, three mottoes were constantly observed: *Service First, Safety First, and Happiness First.*

It meant something for a man and his wife to move into an air-home.

During all these months the real estate operators in New York and the other large cities of the United States had not been idle. To have a million families leave apartment life was serious; to have ten million want to leave as soon as air-homes could be provided for their use was a calamity that threatened their very existence. It is believed that had there been only one antagonist in the field, the Universal Air Corporation, in time the real estate owners would have won the battle by strictly legal means. But the airplane manufacturers were shrewd enough to look into the future, foresee the economic battle and prepare for it. They had as allies all the various syndicates that supplied the necessities of mankind. For example, one firm had the exclusive right to sell hosiery at the service stations. A lady wishing to purchase hose, handkerchiefs or lingerie could simply order an assortment sent directly to her air-home, select what she wished, return the rest and have the charge placed on her monthly bill. The food dealers were especially anxious for this business, and formed a powerful financial help in the approaching struggle.

Rents were lowered in the apartment sections of the city. An effort was made in some of them to introduce service that would compete with the service of the air-homes. The brightest minds of America tried to invent methods of living, whereby mankind would be induced to remain in houses, on the earth, and pay rent. Some measure of success was met with, but more and more it was a losing battle, and it was easily seen that the only factor keeping the middle class on the ground was a lack of sufficient air-homes to house them in the air.

Meantime, millions and even billions of dollars were not paying a fraction of one percent on their investment in cement and structural steel. Only a small proportion of the apartments were vacated, but the lowering of rent necessary to fill them had practically taken away all the profits of the building. In many cases the rental income was hardly enough to pay for the taxes and janitor service. Men who owned ten million dollars worth of property often lacked the cash necessary to pay for the needed repairs.

It is no wonder that they became desperate.

THE realtors' association held many secret and prolonged meetings. Every possible means of effectively coping with the situation was proposed, debated and in many instances tried. Nothing happened. At last they became desperate. Something had to be done and done at once. It was felt that any step of the future would be so serious that the secret of the details could not be made public. So a committee was appointed with unlimited power. They met and decided that they wanted to do something, but did not want to do it themselves or to know how, where, or by whom it was done. They had a fund of twenty-five million to draw on. They decided to employ one man.

They selected James K. Kidd.

He was a soldier of fortune. For twenty-five years his fighting brains had been sold to any nation or group of individuals who wanted their fighting done for them. It did not make any difference to him which side he was on, what the fighting was about, or how many were going to be killed, so long as he received his pay regularly and his bonus at the end of a successful war. A dozen nations had money offered for him, dead or alive, but at the same time each of these nations would have gladly had him in its employ if, by doing so, it were able to deprive its enemies of his services. He had been wounded several times, once left for dead on the battlefield. He had made a dozen fortunes and lost twelve of them.

He had lost everything except his honor and his conscience.

He had been unable to lose these because he had never had them.

It was to this man that the secret committee of real-estate dealers turned. They told him bluntly that they wanted something done to make life in the air unpopular. They were willing to pay the bill, but if he was detected they were not willing to assume any of the responsibility.

He was to be a financial hero if he was successful, but simply an unknown, unauthorized criminal if he failed. After telling him what they wanted done, they asked him for his methods of going after the results.

"I do not think I ought to tell you," he replied. "Anything that I am going to do that will produce the results you want will hardly meet with your approval. If you know in advance what my plans are, you will have guilty consciences; as it is now, you simply have a flattened bank account. Fortunately, you are paying me with cash, and not in bills either, as they can be so easily marked. Gold is the thing. Twenty-dollar gold pieces, and even then I have a habit of going over them with a reading glass to see if they are okay. You just leave me alone; and, no matter what news you see in the papers, keep quiet."

That was the end of the conference. For the next week James K. Kidd investigated the affairs of the Universal Air Corporation. The result of that study showed him one thing. Every improvement in their business, every remarkable innovation, was the result of the suggestions of one man, and that man was Henry Cecil, confidential advisor to the President, Percival Provens. This remarkable fact being thoroughly established in the mind of Kidd, there was just one course of action, and that was the removal of the said Henry Cecil to a place where he could no longer advise.

That required another week of study. He wanted to learn the habits of this dreamer, where he worked, where he played and where he lived. This did not take long. The telephone directory gave him the location of Cecil's air home. He found out that all that was necessary to visit him at night was to ascend the circular escalator, step off at level fifty-seven, and go into his plane home *via* the plane platform and the door. After that, everything would be easy. In fact, he would not even have to go through the door; a well-directed shot through the window would remove the man to other spheres of usefulness.

It was Kidd's idea, that once Cecil was out of the way, the growth of the air-home project would slacken, enthusiasm would die out and the people would be content to return to the earthly apartment houses. He seemed to be the only man who could really be called an originator of new and worth-while ideas. It seemed a shame to kill a man just because he was clever, but this man had become too clever. He was destroying property valuations. Kidd felt justified in removing him.

After the decision was arrived at, all that was necessary was to wait for a stormy night. Kidd wanted a period of thunder and lightning, an hour of noise and confusion, when everyone would be satisfied to stay in his air home and be thankful that it was made of material that was thoroughly insulated against the electricity of the air. He waited patiently for such a night and at last it came. He motored to the base of the air-service station, paid the taxi driver and carefully stepped on the ascending escalator. He had studied these movable steps and he knew that each level was carefully and thoroughly marked. At last he came to level fifty-seven and walked around to Side C. It was all as it should be. On a small brass plate was the name, "HENRY CECIL." There was an open doorway, and between the air-home and the doorway a rubber platform extended, with sides high enough to shut off a view of the ground and make the passage across perfectly free from any danger.

Kidd had never been in an air-home. A day prior to the conference with the real-estate operators he had landed from a two-year engagement as the general of the army of a small South American revolution. But he had studied the plans of the air-homes and had been careful to perfect himself in every feature of them. The fact that the landing platform was out, made everything much easier for him; otherwise he would have had to crawl out over the service tube—no easy task, with the wind howling and the rain coming in blinding sheets.

The landing platform was out. In a period of sheer absent-mindedness, Cecil had forgotten to press the emptying button when he came into the plan that evening. His wife had entertained at bridge that afternoon and Cecil, always old-fashioned, had phoned her that he needed the exercise and would walk home. There was no need of her planing over for him.

He had been thinking of many things as he ascended the circular escalator and almost stepped off at level 57, Slide C automatically, as though in a dream. Arline, who was expecting him had pushed the button and filled the dilatable air platform so he could walk right into the air-home. He had done so, started at once to tell her about some of his new plans and forgot to press the button which would instantly empty the platform of its air and allow it to roll into a long cylindrical opening on the side of the plane.

They had their supper, and then, amid the golden glow of a summer sunset, the clouds had gathered and a thunder storm bore down on them. They liked it. It was the work of a few minutes to put the paper dishes and napery back in the food cylinder and sent it down the service tube. A button pressed allowed the collapsed table to enter the floor. Another button pressed brought up a love-seat for two, and on that love-seat Henry and Arline Cecil watched the storm.

They were happy. Life had been kind to them. Arline was contented, because her man was happy and Henry was happy because he was filled with the satisfaction that comes from the knowledge that he had been able to make millions of his fellow men happy. So, in the darkness, broken only by an occasional flash of lightning, they sat, contented with life.

When Kidd arrived on the landing platform, it was eleven and the storm was more intense than ever. There were no lights in the plane, but as he looked through the window glass he could see two heads above the back of the love-seat. It was hard to tell which was the man. He did not want to make a mistake and kill the woman. The only thing that he could do was to wait till one of them left the seat, and a flash of lightning told him which one that was. He drew his revolver; it was a weapon that had never failed him. He was not only an

expert marksman, but he had spent long hours practicing shooting through glass. There was a trick in that; allowance had to be made for the refraction of light.

Once Arline, in a gesture, threw one arm above her head. At the same time a flash of sheet lightning showed the white arm and the diamond bracelet. That was enough. The head on the left was the man's. That was the one to shoot for—the next time the lightning gave sufficient light.

But for five minutes it was dark and in that five minutes Henry Cecil and his wife decided to retire for the night. Arline was a typical woman. She hated the idea of going to bed without locking up the house and putting the cat out. There was no house and no cat, but in the plane home there was a landing platform. Night after night she asked the same question:

"Henry, have you closed the landing platform?"

This night he had to admit that he had not. In the dark, thoroughly familiar with every square foot of the cabin floor and walls, he walked over to the control board and pressed the button. In a second's time the air was out, and the platform rolled up into the plane.

Arline was nervous and cried, "I thought I heard a scream."

"Nonsense, my dear," said her dreamer husband, "that was just a gust of wind against the side of the plane."

The next morning Henry Cecil awoke earlier than usual. Dressing slowly, he finally sat down, put the ear-phones on and pressed the button for the morning news. The first and most startling feature of the audible newspaper was the fact that a man had been found dead at the base of the air-service station, rather well smashed up. He had evidently fallen from one of the air-homes during the night, but so far no one had been able to identify him.

"That is too bad," said Cecil to himself. "And one of our mottoes is *Safety First*. I will have to investigate it. Such calamities must be prevented in future."

But all the investigation failed to reveal just how this man had met his death, and, after spending the usual time at the Morgue, he was buried in a nameless grave in Potter's Field.

MEANTIME Cecil had been dreaming some more. The sale of air-homes was satisfactory, the investment of the various service companies was entirely in keeping with the promises made when the concessions were granted. Everyone owning stock in the Universal Air Corporation or its subsidiary companies was deriving handsome returns. Practically all of Cecil's dreams had materialized into practical money-making devices. But Cecil was not satisfied, and, after some days of dreaming without dictating, he asked the President for some hours of his time.

"Mr. Provens," he began, "the three mottoes of our concern are 'Service First, Safety First and Happiness First.' The success of the business has depended on our faithful adherence to these principles. I am frankly worried. The Air Corporation has risen high, but in doing so it has stepped on the toes of competitors. They are going behind financially, losing money. The money people have buildings that cost millions, and they are not doing as well as they used to.

"They had had to lower their rentals."

The President laughed:

"But that is what we were after."

"I know, but we have been too successful. We wanted some people to live in the air, but it is ending in almost everybody wanting to live there. Something has to be done about it. Now, my plan is this. Enlarge your corporation and make it bigger and better. Call it the Universal Housing Association. Pool all your interests and reissue stock. Offer to buy any New York real estate that is offered at a fair value and pay for it in stock of the new company. All apartment houses that are over ten years old tear down and use the land for air-service stations. Those that are less than ten years of age convert into factories and office buildings. I think that the business of the nation could be done in New York if there were sufficient office space and homes. As far as that is concerned, a man could have his office in New York and live in an air-home anywhere he wanted to. There would be no trouble in renting offices, and I think that there would be a large demand for factory space if we could furnish quarters for the workers. There might be a number of the apartments that could be made into combined factories and homes for the factory workers and the rent given as part of the wages. All this can be worked out. It is simply a matter of detail. The important thing is that every time you give a property owner shares of stock, paying six per cent. for his land and building which has been paying nothing, you make a friend and a new and active customer for your products. We cannot have too many friends or too many new occupants of air-homes."

"Every time you ask for a personal interview, Henry Cecil," exclaimed Percival Provens, "it means the expenditure of millions!"

"And it means the return of hundreds of millions in dividends. But I am not thinking of this in terms of money, sir. I am thinking of it in terms of service, SERVICE FIRST, to the nation, to the men of the city, to the commonwealth. We owe them a service that is greater than the servicing of their cars and their homes. We want to make a service that will supply them with happy homes, adequate incomes, a comfortable assurance of support in old age. We started in to supply service air stations for air-homes. Why not go on and supply service stations for health, prosperity, comfort and happiness?"

"Is this a dream, Henry Cecil?" asked the President, smiling. He liked the man, the dreamer who sat at a desk in his private office and dictated his dreams to the wife.

"Yes, Mr. Provens. Call it a dream if you like, but go on and make it a reality. It will pay in the long run. A divided New York can never be a great New York. If you are able to gether together all the housing under one company, then the sun will indeed shine on our city, the greatest in the world. Will it be all right for me to requisition an inflatable kiddycoop for my air-home?"

"Why, bless my soul, yes. But I didn't know you had use for one."

"We haven't at the present time, but you know the third motto,

"'HAPPINESS FIRST.'"

THE END.

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